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ABSTRACT

This document is the fifth of seven accompanying volumes included in the Rachel Carson Project. The project attempts to introduce environmental lessons and units into existing courses of study within a high school curriculum rather than to implement environmental education through the introduction of new courses. This volume consists of two case studies of conservation organizations that were developed in an effort to help students gain understanding of ways the ordinary citizen can exercise his rights other than in the voting booth. Among the concepts covered during this developmental process were ecological concepts relating to ways man can alter an entire ecosystem, political concepts relating to understanding our political system and the decision-making processes, social-cultural concepts relating to ways our decisions reflect our values, and communication concepts demonstrating such subjective matters as "benefits" and "costs." Suggested questions for discussion and activities are included at the end of each case study. (MLB)



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CASE STUDIES OF CONSERVATION "BATTLES"

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Project Reports, Volume V
The Rachel Carson Project
USOE Project No. 1-0839
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R. Thomas Tanner, Director

September, 1972

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This volume is one of seven which constitute appendices to the "Operating Manual for Rachel Carson High," final report to the U.S. Office of Education, U.S.O.E. grant number OEG-0-71-4623. That report describes the Rachel Carson Project, which was supported by a grant from the Office of Environmental Education of the U.S.O.E. The Project was an attempt to pervade the existing curriculum of a high school with environmental education, with participation by faculty members representing many (ideally all) disciplines.

The project was based upon the philosophy that a positive environmental ethic should pervade our culture subtly but powerfully, just as - some people would say - materialism or pragmatism now do. Perhaps the best way to encourage the new ethic through formal education is to pervade the culture of the school, subtly but powerfully, rather than to establish a single new course such as "Man and Environment" or "The Environmental Ethic." (Note that the American public school does not offer courses in "Materialism" or "Pragmatism" - enculturation to these values, if indeed it occurs, is via more subtle means.)

This philosophy at work was exemplified by the present writer in an article extitled "A Day At Rachel Carson High," which appeared in the Phi Delta Kappan in March, 1970 (vol. 52, no. 7, pp. 399-401). The article follows a boy through one day at the fictitious Carson High. On this day: his chemistry class is dealing with the chemistry of the internal combustion engine and its emissions as they interact with biota; his English class is discussing the novel The Roots of Heaven, about one man's war against ivory hunters; his physical education class is examining various outdoor recreational activities and the degree to which they do or do not interfere with the activities of others; his American problems class is reviewing old American values such as freedom and equality before the law, and discussing the kind of physical environment in which they can best be popularly achieved..

On this particular day, classes are shortened so that teachers may have one of their regular planning meetings, the object of which is to facilitate the planning of their courses around such themes as:

Tomorrow's Technology and Today's License. (Rapaciousness toward natural resources is frequently excused with the rationale that tomorrow's as-yet-undeveloped technology can restore or offer satisfactory substitutes for those resources. This is a dangerous and irresponsible fallacy.)

Man in Nature, Man over Nature. (The belief that we can conquer nature has traditionally pervaded our culture - another dangerous fallacy.)*

*The reader may wish to refer to other themes and concepts underlying the project. Various of these have been elucidated by the present writer in articles in: The Science Teacher (April 1969, pp. 32-34; April 1972, pp. 12-14); Phi Delta Kappan (March 1970, pp. 353-356); Environmental Education (Summer 1971, pp. 34-37); AIBS Education Division News (August 1972). See also Hawkins, Mary E. (editor), Vital Views of the Environment, National Science Teachers Association, 1971, for an excellent selection of important concepts explained in brief articles by highly qualified authors. We have found this volume useful.

At the fictional Carson High, more or less standard course titles are retained, but each course includes lessons or units reflecting themes such as those above. During the 1971-72 school year, we attempted to implement this model at the new Crescent Valley High School in Corvallis, although some of our work was also done in Corvallis High School, for reasons discussed in the body of our final report.

Participation was sufficiently wide and diverse as to include classes in typing, modern foreign languages, home economics, industrial arts, drivers' training, English, the natural and social sciences, and mathematics, as well as so-called extra-curricular activities. As noted earlier, this volume is one of seven, largely teacher-written, which describe the lessons and units developed during our brief experiment in curriculum innovation.

We hope that the Rachel Carson idea and at least some of these materials will be found worthy of emulation elsewhere.

We wish to thank all of those who participated in the project, and we especially wish to thank Dr. Clarence D. Kron, now Chairman of the Department of Education at the new University of Texas of the Permian Basin in Odessa. As Superintendent of Corvallis Schools, he offered the unfailing support which made the project possible. We are confident that vision and dedication will continue to characterize his performance at his new position, as was true here. We wish to thank also our new Superintendent, Dr. Thomas D. Wogaman, for continuing to provide an atmosphere congenial to our work during its final stages.

The titles of the report and the seven accompanying volumes are as follows:

Main Report: OPERATING MANUAL FOR RACHEL CARSON HIGH

Accompanying Volumes:

- I. MAN AND NATURE - A LITERATURE COURSE
- II. THE AMERICAN AND HIS ENVIRONMENT - A SOCIAL SCIENCES COURSE
- III. ENVIRONMENTAL STUDIES IN THE PHYSICAL SCIENCES
- IV. ENVIRONMENTAL STUDIES IN SEVERAL SCIENCE COURSES
- V. CASE STUDIES OF CONSERVATION "BATTLES"
- VI. ENVIRONMENTAL STUDIES IN NINE COURSES AT CRESCENT VALLEY HIGH
- VII. ENVIRONMENTAL STUDIES: FIVE MISCELLANEOUS REPORTS

* * * * *

Regarding Volume V: It is this writer's belief that the graduate of our public schools should have a more sophisticated grasp of participatory democracy than he now does. Contrary to what we suspect is popular opinion, the ordinary citizen can exercise his franchise in arenas other than the voting booth. He can pledge his time and/or money to groups which represent his interests, and which work in

varying degrees of conspicuousness to achieve ends which the individual alone could never accomplish. The young graduate who believes that his power is limited to voting or to violence has either been done a disservice by the schools, or has done them a disservice through his inattention.

Conservation organizations provide excellent examples of groups which allow the individual citizen to accomplish ends of interest to him, through his voluntary donation of time and/or money. Some time ago it occurred to this writer that case studies of conservation organizations at work might provide an effective vehicle by which students could gain a more sophisticated grasp of participatory democracy in America. It was hoped that the project activities might include the development and trial of such a case study. In fact, we accomplished the development of two but the trial of neither; they are published here in Volume V with that proviso. We hope the reader will agree with us that these two case studies have considerable potential, and we will definitely appreciate feedback from those who try them.

R. Thomas Tanner, Director, Rachel Carson Project

Cispus Environmental Learning Center
Randle, Washington 98377
September 23, 1972

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PROJECT: CASCADIA

**Unit Course
for
High School**

approximately two weeks

Virginia Avery

30 June 1972

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Concepts to be Developed

Ecological

1. Though man needs to adapt his natural environment to satisfy his basic needs, he must, nonetheless, respect the balance of nature.
2. The greater a society's technological level, the greater its exploitation of natural resources.
3. While man may upset the balance of nature through misuse of resources, he may also re-establish balance through intelligent use and conservation.
4. One man-made change, thoughtlessly enacted, can alter the entire ecosystem of an area: people, wildlife, even the composition of the water and soil.
5. Man does not always understand the environment with which he so readily tampers or foresees the damages he effects. e. g. Aswan Dam.
6. Environmental decisions are often politically made for economic gain rather than for the good of the environment.
7. Our water resources are vital and limited, requiring the most intelligent use and planning.

Political

1. An understanding of how our system works:
 - a. How laws are implemented through agencies.
 - b. The avenues by which citizens affect change or prevent change.
 - c. The sequence of operations used by the Army Corps of Engineers in carrying out its program.

- d. The importance of citizens checking, questioning and improving the work of the government; in short, the need for participatory democracy.
- 2. How a public hearing is conducted.
- 3. An understanding that the system does work, though how it works depends upon its input.
- 4. That the best decisions are possible only when all factors are understood and considered.
- 5. An understanding of "pork barrel" legislation.
- 6. That a non-elected governmental agency can wield power.
- 7. The difficulty of enacting change in a government bureaucracy -- even with evidence that its course may be harmful to society.
- 8. Though laws are passed, it is how they are enacted that counts.

Social

- 1. Our decisions, regional and national as well as personal, reflect our values.
- 2. An awareness of the high priority of economic gain as criteria for decision-making in the American culture.
- 3. That which benefits one region or group is not necessarily beneficial to other areas of the country and may be harmful.
- 4. An understanding of the benefit-benefactor principle.
- 5. An awareness that many factors must be weighed in solving problems; economic, ecological, social, political and cultural.

6. An awareness of some of the social and cultural impacts of political decisions.
7. An understanding that projects must be evaluated in view of long-term effects as well as short term benefits; that good projects have the greatest long term benefit-cost ratio.
8. That water resource development stimulates economic growth.
9. That projects are usually justified regionally or nationally without considering the effects on local communities.

Communication

1. That figures and "data" can be manipulated to achieve desired results.
2. That "benefits" and "cost" can be highly subjective matters.
3. An awareness of how circular reasoning, generalizations, vague terms and jargon can cloud meaning.
4. The importance of analyzing how an individual reached his conclusions, and what his objectives are, when weighing his testimony.
5. An approach to dealing with "official" language.

Other Concepts

1. An appreciation for the geography of the region.
2. The understanding that though this battle is local, there are many similar battles being fought throughout the country.
3. Some insight into the possible problems of the future -- crowding, lack of solitude, silting of dams, lack of diversity, and other ecological nightmares.

Terms

Benefit-cost ratio (B/C) -- comparison between the construction costs of a project and the supposed benefit of that project computed in dollars. Benefits must be greater than costs for project approval.

Beneficiary -- refers to someone whose welfare is enhanced by a particular project; the receiver.

Benefactor -- refers to the person paying for the project.

"Pork Barrel" Legislation -- the political practice of passing legislation which enables constituents to receive aid or benefits without any cost or commitment from them.

Negative reciprocity -- condition of "getting something for nothing;" receive without giving.

100-year flood -- the maximum a river will flood in a 100 year period.

revetment -- the protective material on a bank, usually stone.

Background Information

For the last several years a major controversy has been raging in the Willamette Valley. The controversy concerns Cascadia Dam which is scheduled to be built in Linn County, Oregon, on the South Santiam River in conjunction with the Green Peter and Foster dams. Cascadia Dam is to be a rockfill embankment dam, 267 feet in height and ten miles in length and cost \$58 million to build.

According to the Army Corps of Engineers and other proponents of the dam, it is essential for flood control. In addition, they claim benefits of irrigation, boating, expanded camping facilities and salmonoid fisheries will be realized. Those opposed to the dam maintain that a wild, free-flowing river will be turned into a silted pool, fish migration will be hampered and that the dam is not economically justifiable.

The dam, planned since the 1950s, was authorized by Congress with the Flood Control Act of 1962. Sweet Home, Lebanon, Foster, Cascadia, and to a lesser extent, Albany, are the towns most affected by the proposed dam. Logging is the major industry of the area with Douglas fir, spruce, and cedar supplying the plywood, veneer and wood products manufacturing plants. The lumber industry is large, non-local and economically depressed. The area needs a new source of income and many people look to the dam to provide it.

Those opposed to the dam tend to be from outside the immediate vicinity of the proposed project. Many of them belong to environmental and

conservation groups determined to preserve our natural environment from man's mismanagement. The major groups in this battle are the Sierra Clubs, Oregon Environmental Council and Citizens for a Clean Environment. The last group has been most active in its campaign against the dam.

The following readings will consist of excerpts of letters, documents and hearings which have been the battlefield in a war that affects us nationally as well as regionally.

15 August 1969

NOTICE OF PUBLIC HEARING
CN
SOUTH SANTIAM RIVER, OREGON
FCR DISCUSSION OF THE RESULTS OF ALTERNATIVE
DAM SITE STUDIES FOR CASCADIA RESERVOIR

Pursuant to recommendation in House Document 403, the Congress in 1962 authorized construction of a Cascadia Dam on South Santiam River. A pool behind a dam at the site shown in the project document would inundate Cascadia State Park. There are, however, alternative sites which could be developed without flooding the park. The Portland District, Corps of Engineers, has made an exhaustive study of those sites and has tentatively concluded that a downstream site, which would not flood the park, should be developed. In order that the people concerned may be informed of the basis for that conclusion, and be afforded an opportunity to express their views thereon, the Portland District Engineer proposes to hold a public hearing in

SWEET HOME, OREGON
in the
HIGH SCHOOL AUDITORIUM
on
18 September 1969, at 7:30 p.m.

Cascadia Reservoir project is a unit of the comprehensive plan for flood control and multiple-purpose use of the water resources of Willamette River Basin. The project would be located on South Santiam River above the confluence of Middle Santiam River. The plan of improvement includes construction of a dam, regulating outlet works, and gated spillway. The project also includes relocation of roads and the provision for recreation and public use.

All interested parties are invited to be present or represented at the above time and place, including representatives of Federal, State, county, and municipal agencies and those of commercial, industrial, civic, highway, railroad, flood control, irrigation, recreation, fishery, and conservation interests, and property owners. They will be afforded full opportunity to express their views as to the relative desirability of the alternative sites investigated.

The inclosure to this hearing notice includes a map showing damsight locations and cost and benefit data which have been considered for this presentation.

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Army Corps of Engineers' Public Hearing at Sweet Home

One hundred sixty-two people attended the public hearing in Sweet Home, with the greatest number coming from Sweet Home, Foster and Lebanon. The hearing was conducted by Colonel Bangert, District Engineer for the Army Corps of Engineers. Attendance was taken for the record as well as for an indication of whom would wish to speak or submit written statements. Colonel Bangert then made a formal statement which was followed by statements from those present. Governing officials are given the first opportunity to speak.

Before you begin reading, it is important to understand that this is an actual public hearing transcript that has been abridged. The people whose statements you'll read are vitally concerned with either the dam's construction or its demise. For some it means their livelihood, economic gain or "prosperity." For others, a bit of America murdered. These particular statements were chosen because they added another dimension to the battle, another point to consider. When you are through reading this transcript, you should have a list of some of the points "pro" and "con" that need to be considered.

At the actual hearing, the official in charge calls each person by means of the attendance cards and each person states his name, address and occupation. As you read, you will see why this is important.

Colonel Bangert: "Cascadia Dam on the South Santiam River was authorized by Congress in the Flood Control Act of 1962. That authorization was in accordance with the recommendations in House Document 403, 87th Congress

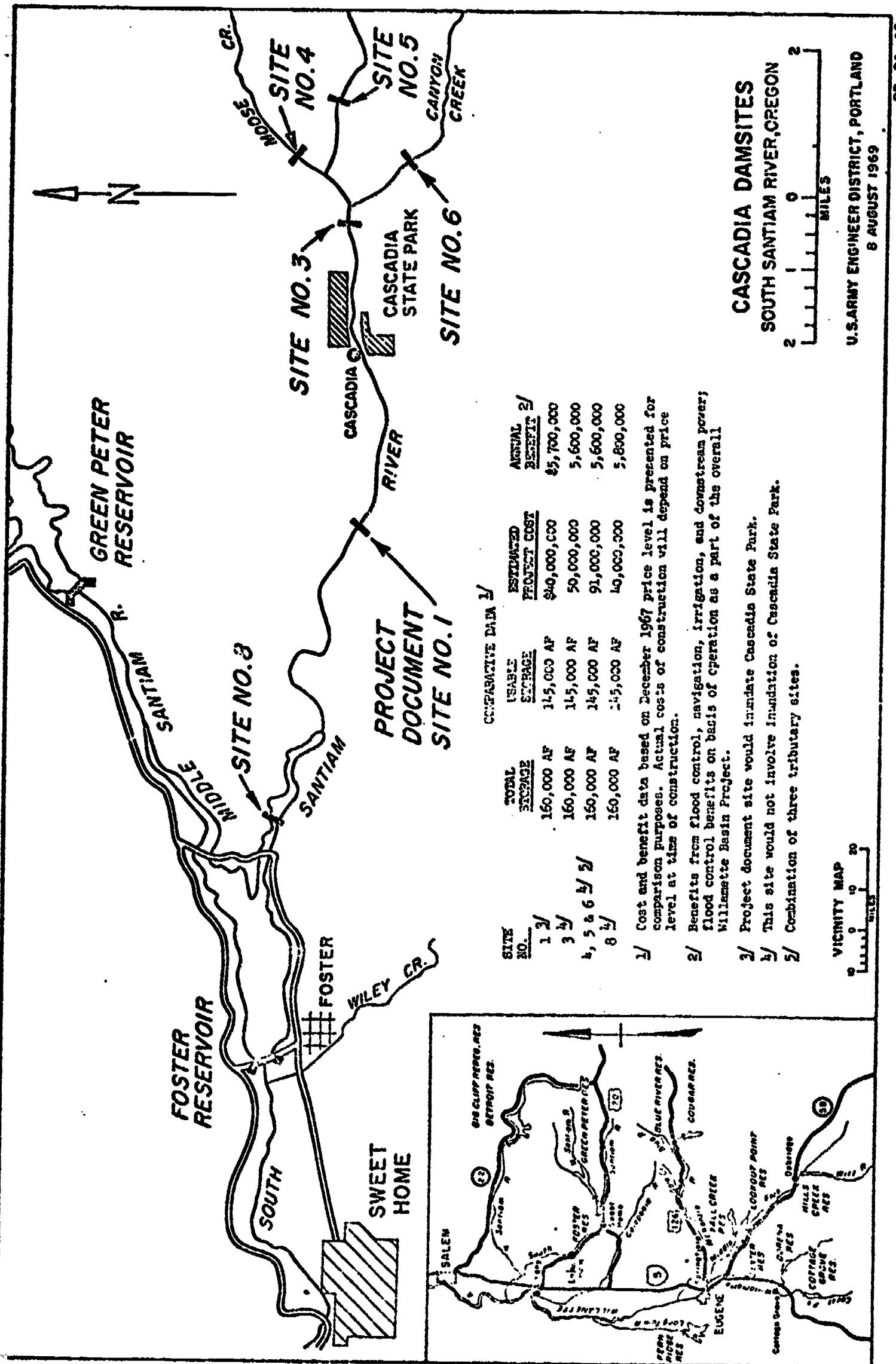
2nd Session. This hearing tonight, therefore is not concerned with whether a project should be authorized on the South Santiam -- that has already been done -- but is concerned rather with the location of the damsite to be developed under the existing authorization. We will present information that we have and the conclusions that we have reached, and we request that you make your views known tonight or within the next 2 weeks. Immediately after that date, based on the results of this hearing as well as our own studies, we propose to recommend approval of one of the sites under consideration for the location of Cascadia Dam."

Colonel Bangert discussed site No. 1. He stated that this is the project site authorized by Congress. Congress recognizes that the Corps should exercise certain latitude in selecting the final site location. "We have studied quite a wide range of alternative sites. Now these studies include an evaluation of the adequacy of the site from an engineering standpoint, costs, benefits, road relocation problems, and any other special problems. As most of you know, the completion of those studies has taken several years."

"In our earlier studies all of those factors, to the extent that they were known, were considered in forming our judgment. In the early 1960's several public meetings were held in this area to discuss the Cascadia Reservoir and possible sites for the dam. At those meetings Corps representatives, my predecessors, and some of the engineers, including at least one here, indicated that on the basis of the data that were then available

the dam located at this project document site, or site No. 1, apparently was justifiable and the dam at any other site apparently would not be. The inundation of Cascadia State Park was discussed in those meetings at the time, and mention was made of possible developments to offset the loss of the park and the mineral spring. These alternatives included construction of recreation facilities and areas adjacent to the proposed reservoir and the possible development of other existing mineral springs as a replacement for the one at the park. "

There are two significant events that occurred since the early 1960's which affected the project economics. One was the flood of December 1964, the largest flood on record on the South Santiam and most of the Willamette Basin streams, and the new developments in the fishery agencies who "consider that the fishery interest could be better served by additional production facilities at the Foster fish hatchery in lieu of fish passage." After discussing the various sites studied, Bangert concluded that the Army Corps of Engineers felt confident that Site No. 8 is as good as site No. 1. "A dam at this site would be 272 feet in height above the streambed. It, too, would probably be an embankment type dam but it could be a concrete-gravity dam. The top of this would be only about 50 feet above the existing highway at the damsite. Quantity of material to construct a dam is estimated to be a little less than for site No. 1 because the river is running through a narrow gorge at the site. The reservoir would be longer and have more surface area than the reservoir for site No. 1. The length would be about 10 miles, the area about 1,920 acres, full pool elevation 849 feet. This



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site has the added advantage that a dam to provide adequate flood storage would not flood out Cascadia State Park. "

"Now, to summarize, our studies show that each alternative would be equally effective for the project purposes. But only sites No. 1 and 8 are competitive from the standpoint of cost. Site No. 8 offers the ability to do the authorized job of controlling floods and storing water for multiple uses without destroying Cascadia Park and mineral spring. In addition to preserving the park and the spring, the No. 8 plan includes the creation of a substantial recreation potential and an initial development of part of that potential. "

"Based on these considerations and subject to possible change based on your views, we believe -- that is, the Portland District of the Corps of Engineers believes -- that site No. 8 should be selected for the Cascadia Dam and Reservoir Project. "

Mr. John W. Oberdorf, Senator Hatfield's representative: "I merely wanted to convey the greetings of the Senator to the Chair, the members of the committee, and to this group and state that he is very much interested and wants to assure you that he is interested in the best selection for the site and the most people benefited thereby from the point of flood control, recreation, sport fisheries, and allied results. We feel that the Corps of Engineers have done a great job and their staff had done a good job in selecting a number of sites and coming to some conclusions, and we are hopeful that this meets with the interests of you people. Thank you very much."

Mr. Saltzman, Assistant regional Supervisor for the Oregon Game Commission: "The Oregon Game Commission has no objection to the location of Cascadia at alternate site No. 8, provided that the facilities and their operation as they pertain to fish and wildlife are similar to those discussed for the project document site. "

Mr. Pat Workman, Santiam Fish and Game Association (membership is over 500): "Now, therefore, be it resolved by the Santiam Fish and Game Association in regular session at Lebanon, Oregon, September the 9th, 1969, that we urge the Corps of Engineers to give every consideration to build Cascadia Dam at an alternate site, preferably at site No. 8 as shown on the map. . . ."

Mr. Rodney Stubbs, Oregon Vice President of the Federation of Western Outdoor Clubs (membership is over 100,000 throughout the U. S.): "There is still a greater issue at stake than the proposed damsite and the alternate choices available for selection of future damsites. Year after year the Corps of Engineers, with congressional approval, have managed to dam nearly every navigable waterway and their major tributaries in this State. I question whether the Corps, or for that matter anyone, can really assess the costs that future generations are going to have to pay for the transformation of our natural environment that seems to be so persistent today throughout the Pacific Northwest. I doubt that anyone has been able to measure the cumulative biological effect of all these public works projects and what their overall effect will be on the realm of ecological and

environmental change. Only time will tell whether or not we have made the right decision."

"Although the Federation does not support the location of any further dams on the South Santiam River, or its tributaries, we nevertheless made a choice on the lesser of the evils that we have before us tonight."

"Sites No. 4 and 6 or Moose Creek and Canyon Creek, respectively appear to be satisfactory alternates for the proposed project. The Federation wants it clearly understood that we are opposed to the construction of any further dams on the South Santiam or its tributaries."

Mr. Lawrence F. Williams, chairman of the Pacific Northwest Chapter of the Sierra Club: "As you gentlemen are aware, I am sure, the Sierra Club's guiding conservation principle is for the preservation of natural environment in an effort to see that man tampers with the environment only when he must. Of all the alternatives you are offering as management possibilities for the South Santiam River, you have apparently overlooked one option altogether. That option is to build no dam at all. We question the need for such an expensive structure that has a projected need of once every ten or twenty years. There will be other times when such a dam will be useful to your flood control program in the area, but not critical. If the construction could be based on the critical need occurring only once in a decade, then maybe we would be better off without it at all. The Sierra Club is convinced that this project is probably just another 'Make Work Project' for the Corps of Engineers that we might be better off without."

Over the long run of history, which will be judged the most destructive to the environment -- your dam or the free-flowing South Santiam River?"

Mr. Brown: "Mr. Chairman and all interested people. Well, I just happen to be one of the people who live up there, and maybe I could speak for a part of the people who live up there. We really do not care. We -- to me, maybe I am not the people I am living there with and so on, but this sounds real good. But what I want to know, and what all of us want to know, is when is this threat of this dam which we have had, not since '62, since this thing was organized or authorized, but before that. We have lost our school, we have lost people, we have let good places just go in the ground because next year 'we are going to be flooded out.' We did not have any choice in the matter, and none of you people talking here have really an awful lot of choice in this matter. " "The water is not the project. With us the project is -- when are they going to do this, or are they going to do this? We do not care. Either do it or leave us alone. Quit threatening us. We have lost our school. In 1946 we had 105 children in the Cascadia School. Believe me. Four teachers. We had a beautiful community. There were -- maybe some were out in the brush, but they are starting to do things. What have we got every year, every year, a threat of a gosh darn dam. We do not give a damn about the damn dam, really, the people in Cascadia do not. And I am speaking for a good share of them. But we would like to know, what are you going to do? And I mean you, you guys that are doing this. The conservation and everything, we love it, that is why we live up there; we live up there because we like it."

Mr. Bruckbauer: "About once in twenty years I get up on my hind legs and have something to say. This is one of them. Most of you know me as Buck. I am the artist who lives up there on the highway -- that crazy one that ties flies -- just about fifty feet below the pool above site No. 8, so you know how I stand."

"Being a flytier I naturally am interested in preserving streams. I came here because this State has something that the others do not. It has an unspoiled beauty. It has not been overdeveloped, yet. It brings tourists here. I think many of you know the statistics. Evidently a lot of people around here do not know tourists though, because flowages do not bring tourists. I have lived around them all my life. They go away from flowages. They leave them. Your kids cannot go swimming in them, they might drown; they are too deep. They cannot paddle along in the streams, fish. They just like to get out and get away from all that building and noise and dust and dirt and meander along a little stream. I do not know -- I think they are frostproof, they all swim in the trout stream. I do not know how they can do it because I sometimes wish my waders were insulated, but they love it."

"Mrs. Woods put it very succinctly. There has got to be another way to stop floods. There is another way. It has been done before. The flood starts because water comes down from the mountain too fast. I know some loggers are going to say this is not the right way, but you can do selective logging like you used to, that keeps the water up there. A long time ago there was a little engineer that lived up in the mountains. He multiplied by

the thousands, he built thousands of dams, little ones. They kept the water up there during the dry seasons -- they did not dry out around there. He kept the stuff to eat, he cut all the old deciduous trees down, used it for food, and allowed the fir to come up through instead. It kept the place reforested. It kept the mountains more moist and easier to control fires. It has been proven. It has been done in Canada. They put the beaver back. "

"I do not think we need any more dams. Two rights never made a wrong -- two wrongs never made a right, never will. Once that dam is in, it is in for keeps. I do not care which one you talk about. I helped build dams. I pulled a chain for a surveying crew around a lot of flowages. But they were only covering mistakes -- mistakes that could never be made right. It is not too late here, but it was there (Wisconsin). Make sure this country stays just the way it is."

Mr. Meredith, biology professor at Willamette University: "I simply want to ask a couple of questions. Number one: Is the construction of a flood control dam incompatible with having this usable temporarily during an actual flood? In other words, is it incompatible with maintaining the free-flowing quality of the river when there is not the imminent threat of a flood?"

Mr. Stewart, Army Corps of Engineers: "Sir, the operation of a dam for flood control alone, which is not what this one is authorized for, would not be incompatible with keeping the pool empty between floods. However, this project is authorized for flood control and for conservation of water for



irrigation, navigation, downstream power generation as primary purposes, with improvement of water quality in the Santiam and the Willamette River as secondary purposes. Those conservation uses of the storage are not compatible with keeping the pool empty. They require that the pool be filled each year so the water can be available for those purposes each year."

Mr. Meredith: "Then I would ask whether or not it is worth that to the people of the State of Oregon or anyone else who visits the area -- whether the multiple uses you suggest which we have made available by having this a permanent dam -- if these are more important than maintaining the free-flowing quality of the river?"

Colonel Bangert: "The answer to that, of course, may be somewhat judgmental, Mr. Meredith; but our studies indicate that the benefits to be reached in the various purposes which Mr. Stewart outlined equal about \$3.60 for each \$1.00 invested. Does that assist in answering your question?"

Mr. Meredith: "I am a little disappointed by the recurrence of this question of economics. I think there are more important issues here than what is the most economically feasible and this keeps coming up, even by some of you good people in the audience which rather surprises me. I am a little disappointed."

"The final question I have is how much do the people of Oregon, specifically this area, have to say about what is more important -- the free-flowing river or the multiple uses that you suggest by the construction of this dam?"

Colonel Bangert: "I think the only way on which I can answer that, of course, is that we live in a democratic society; that the Army Corps of Engineers cannot build anything unless directed by Congress. The people in this audience and other people in the State of Oregon elect the senators and representatives who represent them in that Congress and, therefore, they have a voice in the decisions that are made."

Mr. Meredith: "In other words, in no way is the construction of this dam finalized? You are not committed at this point?"

Colonel Bangert: "I would like to answer that, I hope, clearly, that the construction has been authorized by Congress, the exact site is subject to approval of the Chief of Engineers, and the subsequent construction after approval of the site is subject to the funding of the project by Congress. That funding has not been done yet. Does that answer your question?"

Mr. Jim Brown: "All right then, you was asking about these floods -- what it does to these people down here at Lebanon. Believe me, along with other things, I got over this county probably as much as anybody does. I have been in every section of the county. I sell cars along with owning a store at Cascadia. All right, I have seen my friends and people ruined, ruined by this river taking up sections, I mean acres of the finest land there is in the Willamette Valley and it is still doing it. It is still doing it."

"It just makes you sick if you would see -- you have got ground there that is worth \$2,000 an acre and it is all you got. You take off two or three of them a year, that is \$6,000. You cannot afford it, but what

can you do? This man doesn't know. All he got to do -- I would just love to take him a day right down that river and talk to some of those people. Tennessee Valley on down there, on down into -- all the way down to your Santiam Bridge. Those people been hurt and I mean hurt. There are people that have never recovered. They just moved back and went to work for the other guy. They lost everything."

"All right, if he wants to know what, why they need this, why they have built these dams on the Willamette, why they built it all over -- it is to make this Willamette Valley, which is probably the best place in the world there is to live, a livable place. Before that, believe me, it was not."

A tally of the cards handed in showed fourteen people for site No. 1, thirty people voting for "save the park" or site No. 8, nineteen people with no opinion, seven people voting for "build the dam" regardless of site, one voting for the most economic site and four strongly opposed. In addition, the Corps received numerous statements, resolutions, letters, petitions and newspaper articles which are also printed in the back of the transcript.

Points to Consider

1. Colonel Bangert states that these studies are evaluated from an engineering standpoint. What does that include? Is there anything you think it should include that it doesn't?
2. When Bangert says the site No. 1 at an earlier date as "justifiable" and the dam at any other site would not be, what does he mean by "justifiable?"
3. When it is stated that the "fishery interest could be better served by additional production facilities" what does that mean to you?
4. What is the purpose(s) of Senator Hatfield's representative's speech?
5. Mr. McCosh mentions many reasons why Cascadia Park is unique and he is glad it will not be inundated. However he speaks of attractions that will cease to exist when the dam is constructed even if the park is saved. What are these attractions?
6. If Mr. Stubbs were to use the word "justifiable" what would he most likely mean? When Mr. Stubbs says can anyone "really assess the costs that future generations are going to have to pay" what is he talking about? Is he using "project cost" as Colonel Bangert is using it?
7. Do you think there could be any validity to Mr. Williams statement that this is just another "Make Work Project" for the Corps of Engineers?
8. What dimension of the "cost" does Mr. Brown add?
9. What reasons does Mr. Bruckbauer give for opposing the dam? How does he think floods should be controlled? Get opinions on "selective cutting v.s. clear cutting" and beaver dams to determine if his ideas are feasible.

10. When Mr. Meredith asked "whether or not it is worth it", did Colonel Bangert answer as though he understood the question? Discuss Colonel Bangert's answer to Mr. Meredith about how much the people of Oregon have to say. Is this a realistic answer? Does it really work just that way?

11. When you hear the word "water" what do you think of? In small groups, share your feelings and experiences concerning "water." Then imagine you are a farmer, a fisherman, a child, a conservationist or an engineer working for the Army Corps of Engineers. Try to convey to the group how you would feel if you were one of these people. Discuss whether or not you would support the dam and why.

News Items

On September 11, 1970, the following announcement was issued from the Portland District Corps of Engineers.

"Cascadia Dam on the South Santiam River, will be constructed about one and ahalf miles east of Foster in Linn County, within the upper reaches of Foster Dam, according to Colonel Paul D. Triem, Portland U. S. Army District Engineer."

"He said that damsite had been approved by Lieutenant General Frederick J. Clarke, Chief of Engineers, in lieu of the originally proposed site 5.8 miles farther upstream."

"Colonel Triem said the approved damsite will have all of the advantages of the originally proposed site without its major disadvantages of inundating Cascadia Park and mineral spring. Estimated cost of constructing the dam at the approved site will be approximately the same as for the originally proposed site. Average annual benefits will come principally from flood control, navigation, recreation, irrigation and downstream power generation."

While the Army Corps of Engineers continued with their plans and preparations for construction, Citizens for a Clean Environment went to work. In their newsletter of February, 1971, they placed the following item.

"Time is running out for the South Santiam as a free-flowing stream. A little-noticed \$600,000 item in the proposed federal budget could start the first phase of the Cascadia dam within the next twelve months. The one last chance of saving the South Santiam from becoming a stump-studded fluctuating pool would be a public outcry to halt this approporation. This would be temporary at best. The only permanent salvation would be to have

the Governor specify the South Santiam above Foster as a scenic river under the new Oregon Act."

"Our Cascadia Task Force, organized only two months ago, found itself in the eleventh hour situation. Congress had authorized a dam in 1962 in the pork-barrel Rivers and Harbors Act. However, no funds other than for planning have been appropriated until now. Pressure from hundreds of petitioners to save Cascadia Park from flooding has been enough to halt it so far."

Points to Consider

What actions does the C2E Newsletter suggest for halting construction of the dam? Write a letter to one or all of Oregon's congressional delegation either supporting or opposing construction of Cascadia Dam. Then put it aside til you've completed this unit. At that point you may wish to add to your letter or write a new one.

Corps of Engineers Environmental Draft

According to a federal law, the National Environmental Policy Act of 1969 (NEPA), the Corps of Engineers must issue an environmental statement describing the project, the environment as it is without the project, any unavoidable adverse environmental effects should the project be built, as well as alternatives to the plan and irretrievable environmental effects. Thus in February, 1971, the U. S. Army Engineer District of Portland issued a draft of their environmental statement. The following are excerpts from the draft.

"1. Project description. Located in Linn County, Oregon at river mile 42.2 on South Santiam River about 30 miles southeast of Albany, Oregon. The lake, 10 miles in length, will provide 145,000 acre-feet of usable storage space and will be operated as a unit of the coordinated Willamette Basin system in the interest of the authorized functions of flood control jointly with conservation of water for navigation, future irrigation, downstream power generation and other uses."

"The State and Federal fishery agencies are desirous of rearing juvenile salmonoid fish in Cascadia Lake, as is now being done in the lakes behind several other Willamette River dams. Other fishery provisions will consist of added facilities at the nearby South Santiam hatchery to provide restitution for loss of spawning areas in and upstream from the lake."

"The estimated project cost, July 1970 base, is \$54,800,000. Annual benefits, same base, are \$6,50,000 and the benefit-cost ratio is 3.0 to 1. The annual benefit figure shown does not include those which

will be realized if the recreation development becomes a part of an expanded State Park and if fishery enhancement develops as a project purpose."

"Preconstruction planning for the project is essentially complete. Funds for a construction start are included in the budget for Fiscal Year 1972 now being considered in Congress."

2. Environmental setting without the project. As originally endowed by nature, the area was a beautiful, deep valley, heavily timbered by Douglas fir. The river is in a deep canyon, often difficult of access but originally with much beauty, as the water plunges over the rocky bed. At present, however, the area is in a transitional phase. It is neither remote nor in a natural state, but has been exploited in a disconnected and haphazard fashion. A major highway, U. S. 20, parallels the river up the valley. Debris and garbage have been dumped indiscriminately down the river bank as well as throughout the project area. The area has been cut over, and the forest now is entirely second growth, except for a small area of old-growth Douglas fir trees at Cascadia State Park. In spite of those detriments, the area still retains much natural beauty."

Most of the area that would be required for the project is privately-owned timber land. There are numerous timber access roads, and some portions have been clear-cut. Aside from the timberland, the remainder of the area that would be inundated is in small farmsteads, used for pasturing livestock or producing hay. Residents are part-time or subsistence farmers, commuters to jobs down the valley, or loggers living in rural homes. Many tumble-down cabins and unattended home sites in the area near the park and

mineral spring, some in the lake area and some immediately adjacent, are left over from the time when mineral springs, hot springs, and other such natural phenomenon were major attractions. Total resident population in the project area is less than 200.

Present development in the project area includes a small (less than ten acres) but attractive riverside park, maintained by a timber company and open to the public for day-time uses without charge.

The free-flowing portion of the river which will be flooded includes two falls. Though neither is readily accessible or widely known, the falls have a potential for future appreciation. One of these has been severely damaged, by blasting, to obtain rock for road construction. The other, however, remains a spectacular and beautiful falls, with a drop of 25 feet over a wide rock shelf. There are also two small undeveloped natural soda springs in the stretch that would be flooded. A similar, but larger and publicly used, soda spring is found adjacent to Cascadia State Park, where it has been developed as a tourist attraction. This latter spring would not be affected by the project.

As viewed by those using the highway, the natural environment in this stretch has been somewhat degraded by construction operations. One such operation is the heavily scarred hilltop where a large quarry was developed. Other degradation has resulted from highway and logging construction, and from clearing for land construction of abandoned or unattended cabins and homes.

Some deer and small animals are still found in the stretch that will be inundated by the project. However, ecologically, the area is

already feeling the impact of a growing population, a major highway, and the heavy recreational use of Cascadia Park, and the nearby Foster and Green Peter Lakes. Those two existing projects are so close together as to form almost a single recreational entity. As many as 10,000 persons, with 1,500 campers and 500 boats, now use the two existing lakes on a peak summer day.

Spring chinook salmon and winter steelhead trout are anadromous fish species indigenous to South Santiam River within the area to be affected by Cascadia Dam and Lake. With recently improved conditions on Willamette and Santiam Rivers, average annual spawning runs of about 1,500 spring chinook and 2,000 winter steelhead would migrate through and upstream from the project area. Also the fishery agencies are hopeful of establishing runs of coho salmon and summer steelhead trout in and above the project area. Rainbow trout and a few cutthroat trout and whitefish are present as resident game fish. These resident game fish, supplemented by annual releases of 6,000 to 10,000 rainbows of catchable size from state trout hatcheries, provide resident fishing within the project area. Many species of nongame fish inhabit South Santiam River in and upstream from the project area.

Floods occurring annually in South Santiam River not only damage lands and development along South Santiam River, but contribute to damages downstream along Santiam River and Willamette River below the mouth of Santiam River. In the major flood of 1964-65, damages which

could have been prevented had Cascadia been in operation for flood control amounted to nearly \$30,000,000.

Even with the reservoirs which now exist, water-shortages for irrigation, fish and wildlife, and other water quality factors still occur on many streams in Willamette Basin.

3. The environmental impact of the proposed action. In the area directly inundated by Cascadia Lake, with a surface area of 1,920 acres at maximum storage, the effect will be to affect a transition from a seriously degraded environmental setting to one developed for public use for water storage, recreation, and probably rearing of anadromous fish for the commercial and sport fisheries. It will also mean that a ten-mile stretch of stream covered by the lake will be lost as a natural free-flowing stream. Debris and garbage will be cleaned up, and tumble-down buildings will be removed.

Cascadia State Park and mineral spring will remain for enjoyment by the public. It will be enhanced by additional recreational developments on project lands adjacent to the park and lake. Those recreational developments will include facilities for camping, picnicking, swimming, fishing, boating, hiking, and enjoyment of nature. Attendance is estimated to range from 250,000 visitor days initially to 1,250,000 visitor days at the end of 100 years. Completion of the project will amount to organization of the entire Cascadia-Foster-Green Peter-Cascadia State Park area into one large recreational complex. Although much natural area adjacent to Cascadia will be preserved as a part of the project plan, much of the use

will be in those activities already available at Green Peter and Foster lakes; however, there is no indication that the construction of Cascadia project will result in a supply in excess of demand for those facilities.

The dam and its lake will have several other ecological impacts. Areas now suitable for fish spawning in the 10-mile-long area to be inundated will no longer be usable for that purpose. Federal and State fishery agencies indicate that adequate mitigation for loss of fish habitat and production can be provided by additions to the existing South Santiam Hatchery. Not all fish spawning above the lake will be lost. Some species will be transferred from Foster to a release site at the head of the lake and released to spawn naturally. Those species that do not transfer successfully will be reproduced at the hatchery. In addition to the above mitigation measures, it is expected that the fishery will be enhanced by rearing juvenile salmonoid fish in the lake. It is further expected that increased flows from storage of better quality water, in addition to other measures, will improve the fish habitat in South Santiam River, Santiam River and Willamette River, especially Willamette River through stretches of industrial development, including Portland harbor. Full evaluation of that favorable impact has not been completed.

The largest single impact of Cascadia project will be on lands and developments downstream, through reduction of flood stages, prevention of damage from flood water and debris, and the prevention of loss of topsoil. Average annual flood damage prevention creditable to Cascadia Lake's effect downstream is estimated to be about \$6,400,000.

4. Any adverse environmental effects which cannot be avoided should the proposal be implemented. About 10 miles of natural free-flowing stream will be inundated, there will be some loss of natural spawning and rearing habitat for fish, and there will be some loss of variety in natural surroundings, since the lake behind Cascadia dam will be similar in appearance to the lakes behind Foster and Green Peter dams. The possible lack of diversity in recreation uses might be mitigated if portions of the Cascadia lake were restricted to nonmotorized boats, such as canoes, row boats, and small sailboats. That action would create a somewhat different milieu than that at the other two reservoirs. The adverse impact of loss of habitat on natural wildlife is probably unavoidable, although it will be reduced by mitigative measures such as the above-mentioned plantings.

5. Alternatives to the proposed action. The most obvious alternative would be to leave things just as they are. Under such conditions the valley in the stretch that would have been inundated, probably would continue to be used for small-scale farming, and for commercial timber growing and cutting. Unless more severe local controls were initiated, some parts of the area probably would continue to be used as a dump for refuse from adjacent population. Cascadia State Park, upstream from the project, Foster lake downstream, and the immediately adjacent Green Peter Lake, would continue to serve increasing numbers of recreation-directed visitors. As use of all facilities now available is approaching the saturation point and there is not an unlimited area for expansion, there

would be an unavoidable loss in quality of recreation experience at existing facilities.

6. The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. The project will increase the production of basic material goods through flood control (reduction of loss of crops and topsoil, of deposits of debris, and of damage to improvements), irrigation, improvement in navigation, and a small increase in downstream power production. Also, increased flows of better quality water, in the stream system below the project, will assist in serving the needs of an increasing population and overall economic development. Water surface and related recreational facilities, and fishery enhancement at the project as well as downstream, will enhance the well-being, and hence the productivity of the Willamette Basin. Those effects should continue well beyond the 100-year economic life of the project; there is no inherent reason why they should not continue indefinitely. Thus, in terms of productivity and except for a minor loss of timber production, the impact of the project should be favorable both in the short and long term.

7. Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. In terms of production of material goods, resources whose future use would be precluded by the project include about 3,000 acres of timber land, several hundred acres used for hay and pasture, two soda springs which have not so far been developed, any mineral which might be found in the area, and natural fish production in the area inundated.

Allocation of resources to the construction of Cascadia dam would mean the resources (labor, capital, and materials) could not be invested elsewhere. Society would not be able to enjoy whatever else could have been accomplished by expenditure of an equivalent amount of investment in some other way.

Points to Consider

1. Comment on the Army Corps of Engineer's Environmental Draft. Is it a factual, straightforward statement? With what impression does it leave you concerning the project area? Are there any parts of the report you would have clarified if you could?
2. Evaluate this report for its information, objectivity, clarity, and purpose. Use examples from the report to support your points.
3. Reread the first paragraph under "Environmental impact of proposed action." Do you find any inconsistencies, emotional language or "glossing over?"
4. In this draft, do you see any evidence of rhetorical manipulation or misleading statements? If so, what?
5. To intelligently evaluate the conclusions of this environmental statement, you will need to understand fish migration habits and artificial means of migration, as well as some of the problems of large dams, and dam building in general. By means of reports, either individual or group, share your investigations of: spawneries, fish ladders, fish taxis; flood control methods -- revetments, dams, beavers; post-dam problems -- ecological and social.

Reaction to Environmental Draft

In April, 1971, Citizens for a Clean Environment commented on the Army Corps of Engineers Environmental Statement of February.

"The Corps of Engineers Environmental Statement is primarily a rationalization highlighting items favorable to Cascadia Dam. The Statement persistently ignores, de-emphasizes, and misrepresents many important adverse factors.

Two Oregon laws, passed by popular ballot November 3, 1970, have pivotal impact on the proposed Cascadia Dam. First, practical impact of Senate Bill 10, the new zoning law, has been to limit further urbanization of the Santiam River flood plain, making the yearly \$6,041,000 estimates of flood control benefits unrealistically high and perhaps even making the dam unnecessary. Second, the Oregon Scenic Waterways Act, so overwhelmingly favored by voters, opens the possibility that the South Santiam, one of the most beautiful valleys of the West, will serve a far higher use as a Scenic Waterway. Neither impact is properly evaluated in the Environmental Statement.

The Statement also misleads the reader in painting a picture of the South Santiam River as a logged-over, garbage-strewn, ramshackle valley, when this well-timbered valley is the least logged, least degraded, least disturbed of the Willamette tributaries.

Actually, the proposed fluctuating reservoir behind Cascadia Dam on the South Santiam River would irreparably degrade the environment with its raw, mudline, stump-studded, and terrace-eroded sides. Road

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relocations would further degrade the surrounding slopes. The statement omits many positive values of the existing valley and neglects numerous negative aspects of the dam.

For example, no mention is made that the pool may develop characteristics like those at Hills Creek Reservoir on the Upper Willamette River, Oregon, conditions which could cause permanent muddying of the present clear run-off.

No mention is made of the environmental scar left in excavating all the fill material for dam construction. Indeed, the highlighted "heavily scarred hilltop" in the Environmental Statement turns out to be a quarry used in construction of Green Peter Dam and will likely be enlarged to provide more rock for new construction.

Building a dam in the lake of another dam practically precludes passage of anadromous fish. Fluctuating pools are poor fish producers, but more importantly, efficient flood control requires an empty reservoir which is obviously incompatible with the fishery objective requiring a stable pool. Dams have been the source of most of the State's fishery problems. Our State Game Commission prefers spawning streams over more reservoirs for further development of the State's fishery resource.

The 15 miles of privately owned, high quality stream frontage along the upper Santiam River is worth many millions of dollars, a value which is being rapidly lost. As many miles of cascading river have already been inundated by dams in the Willamette River system that today there

exists a growing shortage in high-quality, stream type recreational frontage and an overabundance of man-made reservoirs.

The environmental impact of the dam and reservoir upon Cascadia State Park has been misrepresented. The reservoir will destroy the principle value of the Park."

The report then elaborated on its introductory comments. It pointed out the diminished need for flood control since Oregon Senate Bill 10 required counties to submit zoning plans. This zoning will remove further building on the flood plain area. In Linn County, no building will be allowed below the 100-year flood line, thus damage costs will decrease.

Citizens for a Clean Environment also questioned the flood control benefit figures supplied by the Corps. "We find it hard to understand how a dam that might have prevented \$10,000,000 damage in a 100-year record flood could have a \$6,041,000 yearly flood benefit." "We do not deny the need for some flood control existing structure in the flood plain of the South Santiam. However, two large dams built on the South Santiam since 1964 already reduce potential loss from another 1964-65 flood. We believe that flood plain zoning, coupled with intelligent revetment construction around the limited existing urban development on the flood plain eliminates need for another dam."

C2E further charges that the Corps report does not accurately describe the area while highlighting "incidental and uncertain" environmental benefits. "Rather than describing mass degradation of a magnificent,

heavily timbered Oregon Cascade canyon, the report leaves the false impression that the reservoir will rehabilitate a disaster area.

At the outset, the Environmental Statement page [23] admits that the 'area still retains much of its natural beauty.' By page [23] of the Statement, the proposed area of inundation appears as being in a 'transitional phase.' Transitional to what? Presumably to a reservoir. By page [24] of the Statement, the pre-dam environment becomes 'somewhat degraded' from construction operations.' The major evidence offered here is a 'heavily scarred hilltop where a quarry was developed.' What is not mentioned, however, is that this degrading quarry is the one used to provide rock for the construction of the Green Peter Dam, and will likely be enlarged for construction of Cascadia Dam.

Finally on page [26], by an unexplained process, the proposed area of inundation has become a 'seriously degraded environment setting 'which will be ostensibly saved from final destruction.' "

Other comments by C2E pinpoint problems that the Corps failed to mention. While calling forth visions of "Cascadia Lake," the Corps overlooked the problem of turbidity (matter suspended in water) which has plagued Hills Creek Reservoir which is geologically similar to Cascadia. While talking about "fish habitat enhancement" they failed to mention how technically complicated it is for fish to pass from one artificial fishway to another. It is much more desirable to have a section of free-flowing stream so that the fish confusion is minimized. In addition it hasn't been noted by the Corps that fluctuating pools are very poor fish producers.

"Increased production of fish is probably incompatible with the need for the dam to be drawn down to near emptiness several times a season in readiness for high water periods. If fish production is to be achieved, a considerable pool must be progressively more costly than necessary for flood control. The Environmental Statement does not discuss this dilemma.

To the knowledge of fishery experts on the Oregon State University campus, there has never been a dam built in the Pacific Northwest that has not damaged or destroyed the natural run of fish. It seems ill-advised and potentially tragic, when salmonoid runs are slowly returning to the Willamette, to build any dam that is so questionable in other regards."

The Environmental Statement page [26] alleges that Cascadia State Park' . . . will be enhanced by additional recreational developments on project lands adjacent to the park and lake.' The Statement implies that an expansion of the park and its recreational facilities would be a direct and beneficial result of Cascadia Dam. This statement is misleading, because the expansion of the State park would probably occur with or without the dam. Moreover, the claim that 'completion of the project will amount to organization of the entire Cascadia-Foster-Green Peter-Cascadia State Park area into one large recreational complex' reveals a vision that shows little regard for natural diversity of an area such as Cascadia State Park.

To evaluate the real 'enhancement' and impact of the reservoir on the State Park, one need merely to examine the head of Foster Reservoir which once simulated quite closely the stream condition found at Cascadia State Park. The present extremely attractive streamside segment of the

Park, with vegetation including mosses and algae softening the river margin, would be converted into a harsh, light-gray band, artificially maintained, devoid of vegetation, with a stream bottom subjected to silt accumulation."

Also not mentioned by the Corps Statement is the disruptive social and cultural effects brought about by the workers associated with the dam. The findings are reported in a study by Oregon State University's T. C. Hogg and C. L. Smith in "Socio-cultural impacts of Water Resource Development in the South Santiam Basins."

Points to Consider

1. What is your reaction to the comments made by C2E? Do you feel that paragraph three of the introduction is valid criticism?
2. Do you feel that the Citizens for a Clean Environment have sufficiently supported their statements?
3. Do you feel that the Citizens for a Clean Environment are speaking from a knowledgeable viewpoint or merely an emotional one?
4. Contrast the Corps of Engineers' description of the Cascadia river bank with the above C2E description.

The Representatives Hear

C2E was not alone in battling the proposed dam. The Sierra Club also was writing to representatives and, in the spring of 1971, Senator Packwood received a letter raising some environmental questions regarding the dam. It mentioned that the reservoir would inundate a 10-mile scenically superb stretch of the South Santiam River, a river which could qualify as a scenic waterway. The impounded water would bisect Cascadia State Park requiring protective structures to prevent flooding of the park. Attractive riverside frontage of the park would be destroyed by the most widely fluctuating shoreline zone of the reservoir. Moreover, observation of the head of Foster Reservoir demonstrates precisely what is in store for Cascadia Park.

It continued that the purpose of the dam was flood control. In 1962 total average benefits creditable to Cascadia Reservoir amounted to \$1,532,800. In 1970, total benefits were quoted at \$5,764,000 annually. While construction costs increased approximately 40%, annual benefits during this eight year interval increased 276%!

Apparently, the letter went, the Army Corps in justifying its projects utilizes data which are favorable to the project and neglects unfavorable data.

For example, in original justification in 1962 relocation of approximately five miles of U. S. Highway 20 was estimated to cost \$8,012,000; yet despite increases in costs, ten miles of relocation associated with the present site is estimated at \$8,249,000.

The Oregon Environmental Council also wrote to Senator Packwood in March of '71 discussing the impact of the dam on fish resources. They quoted a biologist from Oregon State Game Commission as reporting in a letter the preceding year ". . . an estimated 1500 spring chinook and 2,000 winter steelhead would be blocked when the dam is built. Even though the fish will be trapped and sent to a hatchery, this does not negate the loss of another anadromous fish run."

They continued to press for clarification of the benefit-cost ratio. In a letter sent to Colonel Triem, the Executive Director states:

"On November 6, 1969, we received a letter from Colonel Robert L. Bangert stating that the cost-benefit ratio, based on a 3½% interest rate, would be 3.6 to 1. We have since discovered that the cost-benefit ratio was modified in the budget submitted to Congress for fiscal year 1971 to 2.88 to 1.

On June 9, 1970, we received a letter over your signature, which presented the cost-benefit rate of 5-1/8%. At this rate, you have projected the cost-benefit ratio at 1.49 to 1.

We would very much appreciate a clarification as to why the cost-benefit ratio has gone down and what the new cost-benefit ratio would be based on the 5-1/8% figure. Would you compute for us the cost-benefit ratio based on a 5-1/3% interest."

The Corps of Engineers sent the following reply:

"Your letter of 16 March 1971 cites three different benefit-to-cost ratios for the Cascadia Dam project. It requests an explanation of the

reasons for those differences, and a current computation of the benefit-cost ratio using an interest rate of 5-1/8%.

Each of the ratios you cite was computed on a different basis. Two were based on a project interest rate of 3 $\frac{1}{4}$ %, consistent with regulations established by the Water Resources Council, using different price levels and cost and benefit data reflecting two stages of planning. Those two were as follows:

- a. On 6 November, 1969, Colonel Robert L. Bangert furnished you an estimated benefit-to-cost ratio of 3.6 to 1. That ratio was computed using price levels as of December 1967; it was the same ratio as used in the site-selection studies of 1969 which subsequently led to a selection of a downstream site which would not inundate Cascadia State Park.
- b. Subsequently, in the testimony before the Congress in early 1970 on items in the President's Budget for F. Y. [fiscal year] 1971, an estimated benefit-to-cost ratio was used. That estimate, based on the same 3 $\frac{1}{4}$ % interest rate, was made using a project cost estimated on a July 1969 price-level basis. It reflected plans modified by studies which resulted in a change in project site to preserve Cascadia State Park, as well as other changes in project features and facilities. It also reflected omission of an almost \$500,000 of an average annual irrigation benefits, pending completion of additional studies by the Bureau of Reclamation and omission of future benefits pending determination that local participation in future development would be available. (Since that time, Oregon State Parks Department has

requested that we consider a large recreation development, which they would be interested in sponsoring and which would provide an average annual recreation benefit probably comparable to the one which was included in the 1969 estimate.)

The third benefit-to-cost ratio you cited was 1.49 to 1, as furnished 9 June 1970. That ratio was based on computation at 5-1/8% interest, as you requested, and the same price level and basic cost data (July 1968 and \$47,200,000 respectively) which had been used in the then-last testimony before Congress on terms in the President's Budget of F. Y. 1970.

As you requested, we have again computed a benefit-to-cost ratio for Cascadia, using a 5-1/8% interest rate and current (July 1970 price-level base) estimates of costs and benefits. That ratio, 1.51 to 1, is based on continued omission of irrigation benefits, as in item b. above, but with very preliminary future recreation costs and benefits from preliminary joint planning with Oregon State Parks Department.

I realize that the information I have provided is a very brief summary of the effect of changes in conditions and assumptions which, in total, are quite complex and difficult to detail. For that reason, I would be pleased, if you need more detail, to have you visit our office. . . ."

District Engineer

Points to Consider

It will probably take a few readings before you are able to thoroughly understand the above letter. After you feel you understand it, rewrite part (b) in your own words making it as clear to the reader as you can.

To help you decipher section (b) read, "How to Read the Social Register" in The Art of Plain Talk by Rudolf Flesch.

Citizens for a Clean Environment readily accepted the invitation from the District Engineer of the Portland office to visit. They sent a task force of two economists and a hydrologist to review the Corps' computations. They concluded the project to be "clearly economically inefficient and socially unsound." The following is a brief statement of their conclusions.

1. The $3\frac{1}{4}\%$ discount rate is absurdly low. Appropriate rates of 5-10% would eliminate Cascadia Dam from further consideration as clearly uneconomic. A $5-1\frac{1}{8}\%$ should be mandatory.
2. The "system" or "averaging" model is meaningless as a method for evaluation. The whole system of fourteen-dams is not now being calculated -- only one -- Cascadia is.
3. The only appropriate economic scale for deciding Cascadia's benefit-to-cost ratio is an incremental or "diminishing returns" model.
4. Confidence intervals [calculations which take into account two-thirds of the data] should be computed on all parts of benefit and cost calculations. Assumptions concerning future growth and damage from 100-10,000 year floods have very low accuracies. The public should be protected against use of inflated values based on long-range estimates of poor data.

5. Impact of zoning, building codes and protective measures may reduce future predicted damage.
6. Little recognition is given in the Corps' calculation to the destruction of the South Santiam as a free-flowing river.

New Findings

To our congressional representatives Packwood, Hatfield, Green, Wyatt, Ullman and Dellenback, Citizens for a Clean Environment sent the following letter.

Dear Sirs and Madam:

"Our telegram of May 7 alerted you to the new information our Cascadia Task Force has developed regarding Cascadia Dam on the South Santiam River. In January our organization wrote to you about three doubts concerning the dam we then felt were serious enough to request that you delete the \$600,000 item in this year's budget to start dam construction. Much information has been gathered since last January."

They stated that the benefit-to-cost ratios are far less than 1:1, making it "embarrassingly inappropriate for submissions to Congress." They continued to say that due to Senator Packwood and Representative Wyatt, they've had benefit-to-cost information from the Corps -- however sketchy and general its been, and have accepted the \$58 million cost and minor benefit figures without further analysis. "The questionable \$6 million benefit cost figure for flood control has been reviewed with the help of three highly qualified economists. Enough detailed damage figures under the 'worst' condition assumptions are provided by the Corps 1964 Postflood Report to provide a simple benefit-to-cost computation under what we feel is a more realistic economic model than the Corps employed." They did not take into account that:

- a. "Linn County, in which most of Santiam lies, has adopted building regulations which require all new structures to have floor levels

above the 1964 flood line." The impact of their zoning is that it will "virtually eliminate further flood plain urbanization" resulting in diminishing urban flood damage.

- b. "Green Peter and Foster dams along with Fall Creek and Blue River dams, built since the 100-year-level flood of 1964 already control all but peak floods. In fact, a major flood of the 10-to-15 year 'peak' variety occurred last January according to information developed by the Corps' hearing in Albany, April 22, 1971. No damage was reported except for agricultural loss from prolonged high water during post-flood release, a problem that will be aggravated by more dams. Thus the river is already so controlled that a damaging flood is a once-in-over-15-year event."
- c. "Loss prevented by Cascadia Dam could never realistically exceed \$10 million in any of these floods."
- d. "Corps' discount rate or interest rate of $3\frac{1}{4}\%$ is unrealistic. Minimum rates recommended by the Joint Economic Committee of Congress is 5% with alternative of $7\frac{1}{2}$, 10 and $12\frac{1}{2}\%$ as the acceptable array."

The letter concludes with the suggestion that the funds that would have gone into the dam be utilized in building pollution control facilities around affected communities. For the investment of the dam, the towns of Foster, Sweet Home, Lebanon and possibly Albany could have high quality sewage systems.

The Oregon Environmental Council also reported some significant findings which they placed before the Congressional delegates.

- "1. In the December, 1964 flood there was \$71 million in flood damage of which about \$44 million would have occurred even if all 14 dams had been built.
2. The existing structures (7 dams) prevented in the 1964 flood an additional \$531 million damage. This is about 95% of the total preventable damage (estimated at \$540 million).
3. The other seven dams (authorized but unbuilt in 1964) might have prevented about \$26-\$30 million damage. This amounts to 5% of the \$540 million estimated total damages or less than \$4 million for each dam.
4. Cascadia dam could not have reduced the flood damage more than 1% or \$4-5 million."

They also posed the following questions:

- "1. Why were 14 dams requested when the first seven dams covered 95% of their original 100-year flood goal?
2. Why are seven dams needed each costing about \$ 50 million when only \$26-30 million damage could have been prevented in a recent 100-year peak flood?
3. Why are 80 or more dams under consideration for the Willamette Valley?
4. What are the real economics of the big dams proposed on the Umpqua and other Oregon rivers?"

State Hears Testimony Regarding Scenic River

Through the efforts of the various environmental groups enough pressure was exerted to force the Oregon State Highway Division to consider the South Santiam for a Scenic Waterway designation. On November 17, a hearing was held in Sweet Home with Mr. Lloyd Shaw, assistant state highway engineer presiding as Hearing Officer. After making a formal opening statement explaining the purpose of the hearing its importance and the exact portion of the river being considered, he announced that though the study had begun, no conclusions had been reached. He then briefly reviewed some provisions of the Oregon Scenic Waterways Act.

It became law in December, 1970, designating segments of the Owyhee, John Day, Deschutes, the Rogue and all of the Illinois as original components of the Oregon Scenic Waterways System. The act directs that the scenic waterways shall remain free-flowing without dams or impoundments, and charges the State Highway Commission with their administration in such manner as to protect or enhance the esthetic and scenic, fish and wildlife, scientific and recreational values, while allowing other uses to continue.

"A scenic waterway includes the land within one-fourth mile of each bank of the river (a total of one-half mile in width) and the airspace above except land that, in the judgment of the commission, does not affect the view from the river."

The landowner is required to submit notification of changes to the Commission. If he does not receive approval, the landowner may, nonetheless, proceed with any changes one year after notification to the

Commission. "Finally, then, the landowner can use his land as he chooses unless the Commission has taken steps to acquire the land and compensate the owner fairly."

Authority to designate a river or segment of a river as a scenic waterway is given to the Governor but he may not so designate without a favorable recommendation from the Commission and the Water Resources Board. A scenic waterway does not become effective until the day following adjournment of the legislature. Therefore, no matter how the Governor decides, the legislature may alter his decision. The Legislature must initiate action for modifying a Governor's decision. "The Act does not provide for referral to the Legislature. To cancel or reduce the scope of a scenic waterway designated by the Governor, the Legislature must initiate the action."

"We must emphasize that we are not setting out to evaluate Cascadia Dam."

Mayor Larry Christiansen of Lebanon: "I think that the City of Lebanon and I would go on record this evening as opposing this proposal on the grounds that it is probably not the highest use for the segment of river in question.

We would come to these conclusions for about four reasons. One, the proposal under the Act would preclude any other developments up river which would be beneficial particularly to the City of Lebanon.

Two, the proposal would endanger to a degree the industrial forest activity in this segment of river, which again is injurious to the economy of Lebanon.

Three, any attempt to widen or improve Highway 20 would be in somewhat of jeopardy due to the proposal. This too would be injurious to the economy of the City of Lebanon.

And lastly, we feel that ultimately some private property would no longer be on the tax rolls which places a heavier burden on all the citizens of Linn County. "

Mayor Edward H. Buhn of Sweet Home: "City of Sweet Home at its regular meeting officially and unanimously voted to oppose its adoption."

City Manager Mike Gleason of Sweet Home: "I concur with Mayor Buhn and Mayor Christiansen with regards to this river. I think that it would be to everybody's disadvantage if it were made a Scenic River. Initially, I think it would be to the disadvantage of the environmentalists who wish to protect the more pristine rivers of this state because it would divert a large amount of money to a river with very little scenic value.

Secondly, I think it would be a disadvantage to the State Highway Department since they would have to reserve an excessively large amount of a limited budget to buy private land along this river.

Thirdly, I think it would be a great disadvantage to the masses of weekend campers and fishermen, waterskiers and boat enthusiasts and hunters which now enjoy this area because it would reduce the accessibility and eliminate another reservoir and also eliminate a large addition to Cascadia State Park."

Mr. John Davis, employed by Timber and Lands Division of Willamette Industries and also a member of Sweet Home City Council: "To include these lands in a scenic waterway would effectively stop the uses to which they are now being put and materially damage the local economy. Highway 20 would stand little chance of being improved to safely handle the traffic it is asked to support.

I'm sure that the proponents of this type of classification are people that are honestly concerned about protecting the environment from further damage to man. They like many of us are aroused by the cry of the preservationist who would have us return to the days of Hiawatha while somehow retaining the amenities of the modern world. They would accomplish this by locking up many of our natural resources, such as the ones we are discussing this evening, for exclusive use of a few as their playground. All of this being brought about by no personal cost to them.

Well, it's my opinion that there ain't no free lunch. Someone's paying for this exclusive use. That someone is the worker who depends on the resources described above for his employment, the merchant who depends on that worker and the already over-burdened taxpayer who depends on both of them.

Our company alone employs over 1,800 people in Linn County who earn an excess of \$14,000,000 annually. We are dependent to a large degree on the forest resources, both publicly and privately owned in the South Santiam River drainage. Any withdrawal from these resources, such as that brought about by this proposed classification, would handicap our ability to operate. Those of us concerned with ecology must stop

letting our emotions run wild and start using our common sense. We must get down to the hard job of weighing the trade-offs in these cases."

Mr. Earl McFarlan: "I have lived here for 22 years and I am also authorized to speak on behalf of the Sweet Home Linn Chamber of Commerce, but I feel that I speak also the feelings of most of the people in this area.

The general feeling of the people in the East Linn area is that they're opposed to this scenic waterway for the reason that it will lock up a portion of this river so that nothing can be done with it and it will not particularly accomplish anything."

Mr. McFarlan spoke at length about how little the river is really used, how there is really little access and little to do along this river. Moreover, he felt that the only thing that would be done would be negative, that this proposal was only made in the first place to prevent the construction of Cascadia dam.

"Now the other thing that is real dangerous in which the Chamber is very concerned about, in which everyone in Linn County should be concerned about, the same people that propose this scenic waterway as soon as they get it designated as an scenic waterway in the Willamette National Forest, they will then put pressure on the United States Forest Service to lock up additional areas of timber to not have it logged." To support this contention, he cited the Rogue River which had pressure put on it to ban logging in sight of the scenic waterway. "We can expect if this portion of the Santiam River is designated as a scenic waterway that the next step is for these groups to put the pressure on the Forest Service to lock the

merchantable timber that is within sight of that river and that is an awful lot of river -- that is an awful lot of forest -- that is an awful lot of merchantable timber that needs to be harvested and this would be a disaster for Linn County and this would be a disaster to a smaller impact for all the State of Oregon. "

Mr. Dale Turnidge: "I represent the Santiam District Improvement Company. This is a group of farmers who have banded together on the Lower Santiam to protect their farmlands from erosion.

Now we have just seen -- I think many of you have seen a recent release by the Census Bureau of the future population of the United States and they expect the population by the 2000 which is less than 30 years away, the population to become over 300,000,000 people -- it is now around 200,000,000. Now how are we going to feed the other 100,000,000 people in just 30 years -- how are we going to feed them if we don't protect our good farm soil.

I think a lot of the people who are proposing these things and who seem to be blind to the tremendous cruelty that would be inflicted on the future generations. I think if they could see a piece of land after the floods have devastated it, as many of us have seen it, have seen land that could never again be repaired and used to produce food or if it will be, it not be in our lifetime. I think they might become convinced that perhaps there are other things besides what they are working for. "

Mr. Alan Berg: Native Oregonian, Chairman of Cascadia Task Force who lives in Corvallis. "The Cascadia Task Force is composed of members from the Oregon Environmental Council, Citizens for a Clean Environment, Sierra Club and citizens who are not members of any of these organizations. The members are economists, hydrologists, engineers, fishery experts, biologists foresters, ecologists and outdoorsmen."

"The accessibility of this river to western Oregon population centers enhances its value in this respect. The two existing dams (Green Peter and Foster) provide abundant potential for reservoir recreation. The Cascadia Task Force, therefore, enthusiastically supports the classification of the South Santiam River above Foster Reservoir as a Scenic Waterway."

Mr. Jerry Hazelwood, Cascadia: "As far as fishing is concerned the only time that there is excellent fishing in the river anymore is when the State Fish and Game Commission plants fish and they are in the entertainment business and you will find that they plant those trout every Friday and Saturday afternoon so that the weekend campers can come and catch their 20 to 30 fish."

Mr. Roy Siler, Corvallis: "The Scenic Waterways Act is a good conservative law. It permits every use now made of this reach of the river, but was designed to control unplanned development, promotional development, and dam building. Clearly Oregon voters want their scenic rivers preserved as they overwhelmingly showed at the ballot box in 1970."

". . . a quirk of history now makes the South Santiam not only superbly pristine that aquatic river, but the only Willamette tributary

that still has the same scenic delight we native Oregonians once took for granted on the McKenzie and the North Santiam, . . . now gone forever."

"Likewise, leaving the valley to overdevelop without direction, as it would if Cascadia Dam were turned down by Congress, can only result in haphazard development, overpopulation and overuse -- clearly not its highest use.

Though millions of future Oregonians will appreciate just driving through the unspoiled South Santiam, local residents who depend on tourism stand to profit most. Instead of displaying a faded billboard on the freeway featuring an ordinary dam, the South Santiam community could proudly publicize its unique resource -- an official Scenic Waterway.

If the Willamette Valley becomes a megalopolis as is predicted, your preservation of a scenic waterway so near its heart will be recognized as a timely, astute act of statesmanship by succeeding generations."

Mr. Michael Moody: "I am here to represent the Oregon Environmental Council. The Council is a coalition of 75 conservation, planning and sportsman organizations and approximately 1600 conservation-minded Oregonians."

"We understand that some of the local residents feel that the establishment of the South Santiam River as a scenic waterway would not be in their best interest. Many of these people are upset about the possibility of preserving this River are unable, or unwilling to look into the future at what this River will be like if it is left to uncontrolled development. We even heard one gentleman who is opposing the

establishment of a scenic waterway on the South Santiam even though his land would be flooded out by the Dam. We suppose the reason is that if the river is left as it is, he can subdivide his land. If it is flooded, he can sell it to the Corps of Engineers."

"A very interesting dichotomy develops between the opposition and the support for the preservation of this River. Immediate financial gain through subdivision and exploitation of the intangible scenic qualities of the River or through the short-term economic boost that dam construction would give a community, vs. on the other hand, the many thousands of people from all over the State who love and cherish this River and want it to remain a natural and recreational area they will enjoy and be proud of.

We contend that the long run economic as well as cultural and quality of life benefits to the area are far greater in the preservation of this River under the Scenic Waterways Act than if it was converted to a giant still-water reservoir with adjacent mud flats."

Mr. Andrew A. Bruckbauer, Foster, Oregon: ". . . if the river is converted into a scenic waterway; would this preclude the possibility of improving Highway 20 across the pass?"

Mr. Shaw: "Well, mostly the thing at present is precluding improvements on all of our highways is the lack of funds. So, no, I don't think so."

Mr. Bruckbauer: "If a person makes improvements on any of this land would he have to have permission of the State Highway Department -- any improvement?"

Mr. Shaw: "In general anything which is of an agricultural nature, pastoral, normal farming, changes made along the same line, do not require contact with the Highway Commission."

Mr. Bruckbauer: "I see. Would this stop all logging within one-fourth mile of the bank of the river? I get the impression that it would not."

Mr. Shaw: "The wording of the bill would stop it."

Mr. Bruckbauer: "Completely?"

Mr. Shaw: "There is a provision for selective logging which I don't believe is done in this part of the country very much."

Mr. Bruckbauer: "There is a number of other things that have to be brought out. I believe the value of this scenic waterway would be more than esthetic. As a man who has spent some 15 years in advertising in the Chicago area, I can attest to the value of a scenic waterways designation as a means of advertising this area and promoting a source of income that will never diminish and only increase. I can assure you I know how much huge corporations spend for such advertising and they certainly get a lot less because where else can you get every map in the State and in the country designating a spot close to your town as a scenic area when there are so few left."

Mr. Amos Horner: "My name is Amos Horner. I live at Cascadia, Oregon. I'm president of TOMCO Forest Industries, Inc.; also a long-time resident of that area, this area and born in the State of Oregon."

I would like to correct a few false impressions myself that have been put out here tonight. I personally own both sides of the river for one-half mile. It has been open to the general public, the fisherman and my quick impression of some of the things that I went through might make me make this kind of remark. If people truly want to have an experience and truly appreciate that river and love it as much as I do, then they are welcome. Unfortunately the debris, the garbage and the experience of too much booze is too much for local property owners.

Now, I feel as President of that corporation up there, with almost a million dollar annual payroll, that we in no way could stay in business and suffer the harassment of the Scenic Waterways Act. There is all kinds of provisions in this law for things if you are a farmer. There is all kinds of provisions in this law if you don't have to build a new building, only want to repair an old one.

If you want this kind of a water act or scenic waterway -- the property owners will be forced to close the doors and you will be forced to buy them out and Buster, you ain't got the money."

Mr. Frenkel: "I represent the Pacific Northwest Chapter of the Sierra Club and the Mary's Peak group of the Sierra Club. The Pacific Northwest Chapter of the Sierra Club is one of 36 chapters of this nationwide volunteer public interest group. Within our chapter we have more than 4,000 members about half of whom live and work in Oregon. There are six Sierra Club groups centered in such areas as Portland, Salem and Eugene.

Let me dwell on some recreational values. A prime consideration of recreational use and visual appreciation of a scenic waterway is its access. The South Santiam River has greater access to major population centers of Oregon than do any of the other six scenic waterways presently in the system. Exhibit C depicts clearly this relationship. We have taken midpoint of each scenic waterway and calculated the population within circles of 25, 50 and 100 miles. In each category, the South Santiam stands out as providing more people with a quality scenic resource than any other waterway.

A second consideration is to compare the South Santiam to its neighboring river systems on the west flank of the Cascades. The North Santiam has been altered by Detroit and Big Cliff reservoirs; the Little North has gone to the developer; the McKenzie, its upper tributaries dammed, has extensive private development; the upper Willamette also has been impounded. The South Santiam represents one of the last major streams that has not been degraded.

Both Foster and Green Peter Reservoirs provide boating involving waterskiing and fishing. Given intervening opportunities in 15 other impoundments in the Willamette subregion one wonders why the additional replication is necessary next to two fully developed reservoirs. For much less investment, additional recreation capacity in the form of boating can be developed in any one or more of these reservoirs."

Mr. Gordon Short: ". . . I live $1\frac{1}{2}$ miles west of the Cascadia State Park. I own property on both sides of the river.

If this scenic waterway goes through, I will have no property that I can really claim my own on the south side of the river. But I will have a little left according to the distance on the north side. I am surprised. I never thought that I would live to see the day when a person or group of persons would want to come in and take my American rights away.

So, therefore, I am very highly opposed to any scenic waterway. . . ."

Mr. Scott Overton representing Citizens for a Clean Environment: "We would like to go on record as supporting the proposed scenic waterway for reasons that will state in a written statement which we will send to the Highway Commission.

I would like to take this chance to correct several misconceptions. Several people have referred to the amount of land that would be locked up forever in a scenic waterway. In opposition to this, Cascadia Dam would destroy according to the Corps' Environmental Statement, 3,000 acres of forest land and that is actually destroyed; whereas in the scenic waterways the forest within this tract would not be removed from normal timbering operation in spite of what you were told a few minutes ago.

I'd like to read to you the section in the Scenic Waterways Act which refers to that.

'The forest crops shall be harvested in such manner as to maintain as nearly as reasonable as practicable the natural beauty of the scenic waterway.'

And that is the sole restriction on logging.

A statement was also made with reference to the management of timber in the National Forest along the highway and my friend, Alan Berg

has asked me to point out to you that timber along highways and national forests is already managed for scenic value so there should be no change in that. "

Mr. Ken Ferguson: "I'm a civil engineer. When somebody says the word free-flowing in relation of a river, they're talking about flooding. A free-flowing river floods.

The proposal is not only for the scenic river, its to take away people's right to use their land or to use their land as they are using it or to loose it without the right of condemnation.

Now we're talking about feelings of people who want a scenic waterway. We're also talking about people downstream, who have other feelings such as fear, sorrow and despair when they are flooded out. This is going to happen. There is going to be another flood and another flood and another flood down river until the dam is built. "

Mr. David Harmon: ". . . I'm an instructor in the Department of Recreation at Oregon State University.

First of all, I would like to remind everyone here that, that river that we are talking about belongs to all the people of the State of Oregon and of the nation not simply the residents of Sweet Home, Lebanon and so on. We're all the owners of this river. "

Mr. C. M. Leach, Corvallis: ". . . I wish to add another reason for preservation as a scenic waterway that has not been expressed tonight. I

am a kayak enthusiast and I've been for these past eight years. I like any other kayaker worth his salt enjoy the challenge and thrill of white water. There are a number of sections of the South Santiam above the Foster Reservoir that offer the kayaker the challenge he seeks. There are other sections that I personally would rather walk. White water kayaking is a rapidly growing sport in the Pacific Northwest."

Mr. Barry McPherson, Corvallis Solid Waste Recycling Committee: "If you have become familiar with the term 'ecology,' it is part of this whole system. Damming of the river has certainly some adverse effects on this whole system. Certainly it may have some positive effects here and we are talking tonight primarily of weighing the positive and negative effects in the local area, one against the other.

Another point, here in the United States the economic aspect of our society has become rather a high priority. Because of this, many of the arguments pitting esthetic and natural beauty values against economic values have resulted in the only scenic areas really persisting even though they were originally legally protected are those which are unexploitable economically and inaccessible to most people.

I think that an important thing to consider here, you men are in power certainly more than most of us. If the tyranny of the local economic interests over the overwhelming democratic majority, continues to be the deciding factor in every case where esthetic and natural beauty values conflict, then the only areas left for future generations as scenic areas will be the non-exploitable areas and the totally inaccessible areas."

Mr. Ralph M. Black, Albany: "I'm employed as Executive Director of the Linn County ASCS office, which probably doesn't mean much to most of you, that's the U. S. Department of Agriculture office that administers the Federal farm programs in the county.

During the time that I have been with the office, we have put out roughly a million dollars to the framers in Linn County and a big share of that has been in the Santiam watershed. This didn't replace the damage; this just patched it up. This didn't replace the crops, the livestock, and the buildings, fences and other improvements that were lost. We have noticed that these occur on about a five-year cycle.

For some reason, we haven't had the one that was due a couple of years ago. I hope it will be a long time before we do have it, but we haven't had a flood on the uncontrolled streams anywhere in the County since the 1964 flood that has been damaging enough to be called a disaster. So truly we haven't had a test of what the present dams will do.

I think we must rely on the Army Engineers, who have spent years studying the situation and they've got volumes of facts and figures to back up their studies. And they say that this dam is justified. Their figures are open to the public. I know for a fact that the representatives of C2E have examined these figures and have not found fault with the figures. They have just come up with their own conclusions which are different. . . . these figures are being used against the legitimate figures. They are not made public and I think this is something that bear examination."

Mr. Scott Overton, Philomath: "I'm Chairman of C2E. In a report dated last April, C2E specifically challenged the justification of Cascadia Dam. This challenge is public record. The Corps since that time and at least partially as a result of the challenge has drastically revised its justification figures."

June Belli, Albany: "I can sympathize with your economic concerns, but in case of beauty versus money and because of my previous thirty years in New Jersey, all I can think is you just don't know what you're giving away."

Points to Consider

1. What must happen before a river is designated as a scenic waterway?
2. Did you notice any correlation between a person's residence and his position regarding the scenic waterway designation?
3. What are the major reasons cited by the Mayor of Lebanon for opposing the scenic waterway designation? Are his reasons pertinent to the question?
4. Mr. John Davis' testimony is interesting to analyze.
 - a. Discuss both his ideas of "locking up our natural resources" and "exclusive use for a few." Why doesn't he want this area locked up? Does "exclusive use" occur? Give examples if possible.
 - b. What does Mr. Davis mean when he says "All this is being brought about by no personal cost to them." Who does he mean by "them?" Is he accurate in saying that there is "no personal cost to them?"
 - c. Mr. Davis continually includes himself on the side of the preservationist, yet claims the preservationist as the one who want to lock up the natural resources at no personal cost for use of the exclusive few. How do you explain this?
5. Dr. Turnidge says, ". . . perhaps there are other things besides what they are working for." What is he referring to?
6. Explain Mr. Hazelwood's statement that ". . . they [State Fish and Game Commission] are in the entertainment business."
7. According to Mr. Silen, what makes the South Santiam the only river on the Willamette a scenic delight?

8. C., page 56, Mr. Moody summarizes the opposing positions on the scenic river designation. What are they as he sees them? Do you feel this is a fair summary? What would you add or delete?
9. What are the reasons for Mr. Bruckbauer's questions? Are they clearly stated? Are Mr. Shaw's answers clearly stated?
10. Mr. Horner is the second person to testify who mentions a payroll. What is the connection between a payroll and a scenic river designation? To help your thinking, consider the way money moves throughout our society.
11. How important do you feel Mr. Frenkel's charts are to Mr. Horner and Mr. Davis? Do you think his testimony resulted in an attitude change in either man? Why or why not? Do you think Mr. Overton's comments would have more or less impact? Why? Do esthetic matters concern someone worrying about his financial loss or gain?
12. Mr. Ken Ferguson states that the proposal is "to take away people's right to use their land. . . ." and Mr. Harmon states that the river belongs to all the people "of Oregon and the nation. . . ." Explain the differences in viewpoint.
13. Is Mr. McPherson accurate in describing ". . . the tyranny of the local economic interests over the overwhelming democratic majority. . . ?"
14. Respond to Mr. Black's fourth paragraph.

By the end of December, 1971, opponents of the dam had scored several victories. They had saved Cascadia Park, stopped congressional appropriations -- temporarily, and forced the State of Oregon to consider the South Santiam as a scenic waterway. The dam's progress was halted for the moment, and if the State declared the river a scenic waterway, it would be defeated -- permanently. The fate of Cascadia Dam was now in the hands of the state.

However, the Army Corps of Engineers was not ready to admit defeat. According to the February 4, 1972 issue of the Albany Democrat-Herald, Henry Stewart, chief of the planning section of the corp's Portland district office, told the Lebanon Rotary Club members that pressure from local supporters of the dam might help bring the project out of the limbo it has been in since last spring when Congress shelved the project by cutting out initial construction money for it. Stewart said that pressure from environmental groups prompted reconsideration of the project. He also told them that the General Accounting Office (GAO), an arm of the Congress, is now reviewing the project. He is sure that the GAO study was also prompted by questions from the environmental groups.

Even if McCall okays the river as a scenic waterway, explained Stewart, the designation wouldn't go into effect until 1973 which would allow the state legislature to comment on -- and possibly veto -- the action.

"You are part of the state," Stewart told Rotarians, most of whom are businessmen favoring the dam, "let the governor and your delegation in Congress know how you feel."

The state's study and recommendations were not scheduled for release till the end of May and the General Accounting Office report till July, 1972. Yet, before May 2, word had been received, and the report confirmed by Congressman Dellenback's office, that State Water Resources Board Director, Fred Gustafson had formally asked to testify in Washington D. C. on May 10* for funding for Cascadia Dam. Since the State Water Resources Board and the State Highway Commission are the agencies responsible for making additions to the scenic waterways, what did this mean?

One person, in a letter to the editor, (Corvallis Gazette Times, May 2, 1972) analyzed it this way:

"Congress turned down funding for Cascadia Dam last session until Oregon could study the South Santiam for a scenic waterway. The study has been made, but no decision has been publically announced. Thus, Gustafson could not possibly consider asking to testify before Congress without some advance assurance that the State Highway Commission would announce a decision before May 10 and that decision would be unfavorable. Even the request to testify, taken alone raises disturbing questions. If no decision has been made on the scenic waterway, how could the Water Resources Board make an impartial one now that its Chief has asked to testify for funding. If the decision was made some time ago, is the State Highway

*The House of Representatives subcommittee on public works was meeting that day to hear testimony.

Commission holding back the announcement until just before the hearing to affect opposing testimony?

Should official state testimony before Congress be one-sided on a controversial issue? Shouldn't our state officials have waited until the economic report on Cascadia Dam by the General Accounting Office is released before asking to testify?"

May 16, 1972

FOR RELEASE AT HIGHWAY CCMMISSION MEETING

The State Highway Commission today has recommended to Governor McCall that the South Santiam River not be designated a scenic waterway.

The State Water Resources Board, which must concur if the Highway Commission is to submit a favorable recommendation to the Governor, concluded that downstream benefits which will accrue upon completion of the proposed Cascadia Dam Project outweigh the interest in preserving the river in its free-flowing state.

The Board cited enhancement of water quality, improved stream-flow, increased recreational opportunities and a beneficial impact on fish and wildlife resources --all of which will result from completion of the Cascadia Dam Project -- as factors influencing its decision.

The Commission's action follows a 9-month study of a 24-mile segment of the Santiam River by the Parks and Recrcation Section of the Highway Division. The comprehensive study included extensive field work, consultation with many local, state and federal agencies, and an

examination of a public hearing record containing many pages of testimony.

The study report reveals that the segment of the Santiam under consideration generally satisfies the minimum criteria for a scenic waterway as established by the 1971 Scenic Waterways Act.

The Commission's action on the request to designate the Santiam River as a scenic waterway is expected to end consideration of the Santiam as a scenic waterway. The Act authorizes the Governor to designate new scenic waterways, but only after a positive recommendation has been made by both the Highway Commission and the Water Resources Board.

Points to Consider

1. What did Mr. Stewart hope to accomplish by mentioning the legislature's ability to veto?
2. Why is the South Santiam obviously not being designated a scenic river? Is this a valid reason?
3. Since the dam was the major consideration in stopping the scenic waterways designation of the South Santiam, why didn't the State Highway Commission and Water Resources Board simply say so before the long, costly study was done?
4. Discuss the Highway Commission's news release in terms of political and economic considerations.
5. You might enjoy reading the Scenic Waterway Study on the South Santiam River as written by the Parks and Recreation Section of the Oregon State Highway Division. Compare and contrast its descriptions of the area with those written by the Army Corps of Engineers in its Environmental Draft. In addition to the evaluation of that segment of the South Santiam River as a scenic waterway, there is also some valuable information about the area plus several fine pictures.
6. According to one study by Hogg and Smith ". . . there is little local involvement in water resource planning. Local people are recipients of emphasized benefits provided outside of their own labors and calculated by outsiders." In view of this statement, how do you explain the people's of Sweet Home, Lyster and Cascadia accusations that the "city people" (those opposed to the dam) were telling them what to do and how to use their land.

Conservationists Challenge Decision

The environmentalists reaction to the State Highway Commission's news release was presented to the media May 25, 1972.

"The OEC, a coalition of 80 conservation, sportsman and planning organizations and 2000 concerned Oregonians, has called for a hearing over what they feel are inherent conflicts of interest in both the State Highway Commission and the Oregon Water Resources Board's decision-making process. Larry Williams, Executive Director of the Oregon Environmental Council, stated that the Oregon Highway Division would stand to lose over \$12 million in highway relocation funds and over \$3 million in park funds if the proposed Cascadia Dam is scuttled in favor of the Scenic Waterway.

In the recent ruling, the Highway Division study report found that the South Santiam River fully qualified for designation. The only reason that was given for recommending against the establishment of the Scenic Waterway was the assumption of the State Water Resources Board involving benefits from enhanced summer flows from the proposed Cascadia Dam.

'These flimsy claims just do not stand up to the fact,' said Larry Williams. 'The argument that the proposed dam would improve Willamette River water quality is not a significant factor, thanks to river cleanup by the Department of Environmental Quality. There is plenty of summer flow now.'

The OEC contends that the decision of the Highway Commission was in direct violation of the Commission's own criteria for studying the river. Williams pointed out, that at the public hearing held by the State Highway

Commission, at the beginning of this study, it was specifically requested that the public not address itself to the possibility of the construction of Cascadia Dam. In the Highway Commission's news release of May 16, however, the Commission stated that, 'The Board cited enhancement of water quality, and improvement of stream flows, increased recreational opportunities and the beneficial impact on fish and wildlife resources -- all of which will result from completion of Cascadia Dam project -- as factors influencing its decision.' The OEC points out how ironical this conclusion is in the face of the pending General Accounting Office study of the Cascadia Project which reports that the Dam may not be a viable project and that the Corps' figures are not based on fact."

Points to Consider

1. Comment on OEC's reaction to the Highway Commission's decision. Does it have any validity? Support your answer.
2. Do you feel that the State Highway Commission and the Water Resources Board are being required to perform functions that are inherently conflicting in objectives? Discuss this from social, political and economic standpoints.
3. If the dam does get built, do you feel that all the opposition did was a waste of time and energy? If not, what did they accomplish?
4. Now that you've read related materials, do you see any way the opposition could have made their arguments stronger? How could they have gained the support of more people?

Not Over Yet

The Cascadia battle is still raging. The current cost for the dam's construction is now over \$66 million. By the time you read this, the General Accounting Office will have reported its findings to the public. If it finds, as a preliminary report suggests, that the ratio is indeed too high, then chances are that the Army Corps of Engineers will either work till they arrive at a more acceptable ratio or, more likely, shelve the project for a number of years til the dust settles thick, then pull it out, dust it off and try again.

It is important to note, however, that water development planning is more and more being challenged by conservation-minded people, local citizens affected by these projects and economists questioning the validity of federally calculated benefit-cost ratios. A creative approach coupled with respect for natural laws is essential for dealing with all our water resource problems, now and in the future.

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Summing Up

1. What does the benefit-cost ratio reflect about our values as they apply to water resources?
2. How valid is the benefit-cost ratio as a decision-making tool? What other considerations need to be included?
3. Based on your observations, would people in our culture rather be a benefactor or a beneficiary?
4. Are most proponents of the dam beneficiaries? If so, how? Do you feel they might change their stand if they were required to share in the cost of the dam?
5. Does the Rivers and Harbors Act encourage negative reciprocity as a national value? Explain your answer.

Possible Projects

1. Compile a list of reasons "pro" and "con" for constructing Cascadia Dam.
2. The life of a dam is now calculated at 100 years. Imagine you are examining Cascadia Dam site (presume its construction), what might you expect to find? Write what you feel your reaction might be to the builders of the dam including your findings.
3. Do an exercise in "officialese." "How 'o Read the Federal Register," The Art of Plain Talk, Rudolf Flesch, Harper Bros., New York, 1946.
4. Read aloud the testimony at the Scenic Waterway Hearing, assigning parts to different people. When someone says something that you feel needs correcting or challenging, call "Correction" or "Challenge", then make your point. The Challenger may also be Challenged.
5. Visit a near-by dam and write a description of what you see -- comment on recreational facilities, users, and environmental factors.
6. Interview an expert in forest, fish, and/or wildlife management. Report your findings.
7. Argue for or against the construction of Cascadia Dam from the viewpoint of one of the following: farmer, fly-fisherman, sightseer, tavern owner, real estate agent.
8. You are a feature writer for your newspaper. Write an account of the basic controversy so your peers can understand it.
9. List ways the average citizen can influence government decision-making. Which ways do you feel are most effective? Combine your answers for a master list.

10. Read about the Cossatot Decision and compare it with Cascadia. Prepare a short play enacting the courtroom scene.
11. Either as individuals or in committee devise a "scale of criteria" for evaluating water resource projects. You might decide on points to include, then arrange them in order of priority or assign relative values to them.
12. Examine the letter you were asked earlier to write to your Congressman, concerning Cascadia Dam. Write a revised version and send it.

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The Miami Jetport Controversy
A Case Study

By Judith Koerner
1972

Introduction

In our democracy we seldom see a change take place without challenge. Any proposal, whether it be for a local re-zoning or a national shift in priorities, is bound to represent profit to some and loss to others. The individual can work to effect or prevent change in several ways. As one man, he can express himself through the vote, in letters to congressmen and other public officials, through support of the party or candidate of his choice and with other individual efforts. However, probably one of the most effective means of influencing governmental action--local, state and national--is through membership in interest groups that will support his views.

These groups exist because, in the United States, as elsewhere in the world, there are large numbers of persons who share various common interests and attitudes in economic, racial, religious, social, sectional and other matters. It is only natural that they should join together to promote their common interests. Whether these groups are called associations, clubs, leagues, unions or by some other name they become interest groups (sometimes called pressure groups) whenever they begin to seek their ends by attempting to influence governmental action.

Pressure groups represent economic, business, agricultural interests, labor and professional causes and ideals. Between elections they serve as the means by which the individual normally speaks to the government. These groups seem to speak for all their members. To the governmental decision maker they can represent, not only potential votes at election time, but often financial help as well.

"Interest groups work in a variety of ways and at many points in the political process. Many of them are active in political campaigns - supporting or opposing candidates, working for or against certain ballot measures, getting out the vote, producing and distributing propaganda, and the like. Most of them work for the passage or defeat of legislative measures; in other words, they lobby. Many attempt to influence the governmental agencies administering the laws that effect their interests. Some even work through the courts by challenging the constitutionality of statutes they oppose or by seeking injunctions (court orders enjoining or preventing action)."

This unit is a case study of interest groups in operation. We will look at the issues involved and study the methods, strategies, and effectiveness of the groups concerned. At the end of the study you should have some awareness of the means and methods that you could employ, within your groups and communities, to effect or prevent change.

1. Magruder, Frank Abbott, Magruder's American Government, revised by William A. McElroy. Copyright 1966 by Mary Magruder Smith. Reprinted by permission of Allyn and Bacon, Inc.

Questions and Activities

1. Which of the following would you consider an interest group? Justify your answer, and if possible, give examples of the way they operate to achieve their goals.
The Audubon Society
The Boy Scouts of America
The American Medical Association
The League of Women Voters
National Rifle Association
Teamsters Union
2. Make a list of your most pressing concerns. What groups now organized could help you deal with these issues?
3. Identify the interest groups that exert a strong influence on your local or state government. Write a paper dealing with its membership, organization, influence, methods and goals.
4. List the interest groups that either you or members of your family have joined. What type of action do they support?

The Case

Our case study deals with a battle that took place in Southern Florida. The conflict stemmed from the commercial needs of metropolitan Miami and the conservation needs of Everglades National Park. The question dealt with the building of a jet airport just north of the park. It became a confused and complicated issue. Problems included: the need for balanced control of the environment, conflicting interests between local and state forces, state interests and national interests, and public sentiment opposing private profits, with air and water pollution thrown in for good measure.

The question became whether or not Miami's growth as an air transportation center should take precedence over the well being and perhaps the survival of the Everglades and its unique wildlife. As Audubon, a publication of the National Audubon Society has reported, "Other national parks preserve geological or scenic features of our continent - but the Everglades is the only national park created to perpetuate wildlife. This wildlife community with its multiplicity of invisible strands that link all animals and plants, is considerably more delicate than a mountain or canyon; it is easily thrown out of balance and it can be destroyed so quickly that there is little opportunity to save it."²

The park is already in danger. Development and the canals and dikes built by the Army Corps of Engineers have blocked its natural source of water, the normal flow from Lake Okeechobee. The Corps of Engineers does have the technical capacity to deliver water to the park. Park supporters have long tried to get some sort of annual guarantee (a necessary minimum estimated at 315,000 acre feet) for the park.

2. Peter Farb, "Disaster Threatens the Everglades," Audubon, p. 304, Sept.-Oct. 1965

Yet there are other demands on southern Florida's water supply. The "unique, delicate" Everglades just happen to be near one of the fastest growing areas in our country. This growth also puts pressure on the water resources. Water for people, their agriculture and industries, for commercial development, drinking, health and sanitation.

The amount of water necessary to maintain the park is not a problem in normally rainy years. But in times of drought, no public official dare guarantee the park water before the needs of the people living in the area are met.

The People vs. The Alligators
Jetport vs. Everglades??

One view of the issue adopted the cry of "the people vs. the alligators". Whose interest was to come first? There was no doubt that the Miami area would need a new airport. This would help maintain continued prosperity and industrial growth. Aviation employs 70,000 people around Miami. A new airport would create 60,000 new jobs and three times that in related employment.

The old facilities were simply not sufficient to meet projected needs of the 70's. Southern Florida is experiencing unprecedented expansion. By the year 2000 it is estimated that Florida will be our third most populous state. Real estate development is booming, traffic by road and air is increasing tremendously. Since 1961 the passenger traffic at Miami International Airport has nearly tripled, air cargo and air mail have more than doubled, the number of air traffic movements went from approximately 260,000 in 1961 to a high of 440,000 in 1967.

A great deal of this traffic stemmed from training operations conducted by the major airlines. William W. Gibbs, of the Broward County Port Authority, in his testimony before the Senate Committee on Interior and Insular Affairs discussed the problems of training flights. He estimated that these flights accounted for 40% of all take offs and landings at Miami International Airport. In 1967, for example, this accounted for 145,000 operations.

These flights were essentially turn arounds - take off, circle and land. Public objection to the noise involved, particularly at night, was severe. These objections, plus impending congested air space, served as the original impetus for a new training airport, that could ultimately be expanded into a full fledged commercial operation.

The Port Authority began looking for a suitable site in 1965 and continued for 2½ years. Seventeen sites were considered, as a group effort on the part of the Federal Aviation Administration (F.A.A.), the Port Authority, and the airlines. They looked at locations in Georgia and the Bahamas as well as Florida.

Finally the study was narrowed to five sites with the Everglades and north of Everglades National Park. Three of these were ruled out because of objections of the National Park Service and the Central and Southern Florida Flood Control District. The fourth site became

unavailable when unrelated demands for a land trade were encountered. The fifth site, ultimately selected, lies partly in Dade County and partly in Collier County. Its nearest point, the southeast corner, is slightly more than six miles from the closest boundary of the Everglades National Park.³ Construction of the training airport began in September 1968.

The Port Authority's choice received implicit federal approval in the form of grants. By July 1969 they had been given \$500,000 for the construction of airport runways and another \$200,000 for the construction of a transportation corridor.

Ultimate plans included an area of 39 square miles, big enough to contain the Los Angeles, San Francisco, Washington's Dulles, and New York's Kennedy Airport with room to spare. Two of the runways were to be six miles long, to accomodate the supersonic transports. A 50 mile long corridor, perhaps $\frac{1}{2}$ of a mile wide, was planned to bring fuel by pipeline, supplies by road and rail and passengers in transit, estimated at 50 million per year. Landings and takeoffs were projected at one every 30 seconds, on the average. The Port Authority planned to bring the training facility into full commercial use in the period 1975-1980.

However, during Senate hearings, Port Authority representatives promised not to proceed with the development of the airport on a full commercial basis until it could be proven that such development would not have any adverse effect on the park. The Port Authority had operated good faith. They had received Federal approval in the form of grants and licenses. They felt they were best serving the need of the people of their area - providing for growth, new jobs, better transportation, less conestion in Miami, etc.

Furthermore, this was essentially a local zoning issue. The land for the jetport was owned by the county. The purchase had been financed through the sale of bonds. The County Commissioners and Port Authority had the right to develop these lands to a very great extent, as they saw fit. Though they hoped the park would not be destroyed this was certainly not their highest priority.

Questions and Activities

1. How are the Everglades unique?
2. What benefit did the Dade County Commissioners hope to receive from a new jetport? How would this affect the life of the people in Southern Florida?
- * 3. Testimony - William W. Gibbs, U.S. Senate Committee on Interior & Insular Affairs, Water Supply, The Environmental and Jet Airport Problems of Everglades National Park; Hearings, June 3 and 11, 1969
p. 94

3. What is a zoning regulation? What role does the Federal government play in zoning? The State government? The local government? How is zoning determined in your community?
4. As a city planner you are responsible for approval or rejection of individual industries wishing to locate or expand existing operations in your area. What kinds of questions must you ask of each industry before you approve their plans?

The Conservation Attack - Interest Groups In Action

Though conservationists were hostile to the construction of a training facility so close to the Everglades, they were particularly horrified at the enormous expansion plans that were included in the commercial airport. Initially they had taken the Port Authority's assurances that no harm would come to the Everglades, but as plans came to light they came to distrust and disbelieve everything coming from the Authority.

They were sure that the Authority planned to continue to develop the area. Why else would it be necessary to construct the huge access corridor - for which they had received Federal Funds? A much smaller roadway would have been sufficient for the operation of the training facility.

Senate Support

The thought of a quarter million people, the natural result of expansion and development, living and working that close to a wilderness was met with united opposition from conservationists. In April 1969 the National Audubon Society called four other major conservation organizations to a strategy session. They planned a nationwide coalition that included the United Automobile Workers and the United Steelworkers, as well as conservation groups, to carry the fight to Washington. To do this they enlisted the aid of Senator Henry Jackson, Chairman of the Committee on Interior and Insular Affairs. He held hearings in mid June to discuss the Everglades generally and the jetport construction in particular.

During these hearings, Dr. Elvis Stahr, President of the National Audubon Society, expressed the concern typical of conservationists. Speaking of the threat of a jetport, he said, "I first wish to make clear that neither the National Audubon Society nor the other conservation organizations with whom we have associated ourselves in seeking a solution to this problem have argued that no new airport facilities are needed to accommodate the growing travel economy of southern Florida.

"We do insist the site now proposed by the Dade County Port Authority is in the wrong place. We insist for the following reasons:

"The proposed jetport will be an industrial, commercial and residential complex equivalent, if and when - and I hope it is never fully developed, of a sprawling city of at least a quarter of a million people.

"The pollution problems it will create will be worse than those of a normal city and impossible of effective control and abatement. No one has suggested a way to eliminate the combustion outfall of jet engines, much less contain it,

"This outfall is going to settle on the National Park itself and into broad areas of its vital watershed - into the Big Cypress Swamp where the jetport is proposed to be located, and into the Everglades now contained within the conservation areas of the flood control district...

"Another form of pollution that cannot be contained or abated is noise. The earsplitting, nerve-rending roar of big jets is going to be a constant environmental depressant over much of the national park.

"I am not talking now about the environment for wildlife but the environment for people. The wilderness tranquility of Everglades Park, one of the qualities that attracts its millions of visitors will be seriously damaged.

"The sewage effluent from the jetport city could be treated and piped into the Gulf of Mexico. But even were this to be done the water supply of the western third of the National Park would be depleted to the extent of the outfall to the sea.

"The pollution resulting from split and leaking oil and from the exhausts of thousands of automobiles on the jetport parking lots and on the approach roads is not going to be contained and treated on the streets of any other city....

"...A jetport site is incompatible with the purposes for which Congress established Everglades National Park for the benefit of Florida and the United States.

"The question is not one of the people versus alligators as some have tried to make it appear. The question is, even with us, the welfare of the people. In this context, as the phrase is so glibly used, alligators are merely symbolic of great and irreplaceable natural resources that are essential to the economic and social welfare of people and most particularly to the present and future residents of southern Florida."

Existing Legislation

The conservationists had effective weapons in terms of already existing legislation. Section 4(f) of the Department of Transportation Act states: "The Secretary of Transportation is required to co-operate

4. Testimony - Dr. Elvis Stahr, U.S. Senate Committee on Interior and Insular Affairs, Water Supply, The Environmental and Jet Airport Problems of Everglades National Park; Hearings, June 3 and 11 1969 p. 140-142 (Washington D.C.: United States Government Printing Office), 1969.

and consult with the Secretary of Interior and others in development of transportation plans and programs that include measures to maintain or enhance the national beauties of land traversed.

"The Secretary shall not approve any project or program that requires the use of any publicly owned land, from a public park recreation area or wildlife and waterfowl refuge unless there is no feasible prudent alternative to the use of such land and such programs include all possible planning."

However, the Department of Transportation had given its approval of the jetport tower and had given Federal monies for both the construction of the training runways and for the access corridor. The conservation coalition, therefore set out to prove that this constituted a violation of Section 4(f).

To do this, State and Federal conservation agencies along with private conservation groups addressed over one hundred questions to the Dade County Port Authority. These questions covered every aspect of the jetport - its planning, development, operation, water quality and supply, drainage, pollution control, noise, wildlife and recreation provisions, surface transportation and waste disposal.

Answers such as "this question is under study", "study in progress", "no study of this type has been started" were common throughout the Port Authority's response.

The Port Authority did not plan to open the commercial airport until the period 1975-1980. Their responses indicated great confidence in coming technological advance and innovation. Though they had no answers at this time they were sure that a solution, compatible to the environment could be found once operations were underway.

The conservationists, of course, were unwilling to accept these kinds of vague assurances. The Port Authority's responses had made it rather clear that the required "all possible planning" had not been accomplished. For example, there were no real plans for waste disposal, a clear violation of Section 4(f).

Appeals to the Executive Branch

The coalition did not limit their appeal to the legislative branch of the government. During the Senate hearings they introduced a letter sent to Secretary of Transportation, John A. Volpe, in April 1969. The letter was signed by practically the entire conservation and environmental movement and called upon the Secretary to "stop this objectionable project through the withholding of Federal funds."

Membership

The large membership of the conservation coalition was also a determining factor. These people represented potential votes as well as financial support to Washington decision makers. The Audubon Society, the Wilderness Society, the National Wildlife Federation, and others

set out to educate and activate their membership to the threat of the jetport. Through their publications they called for a public outcry to save the Everglades.

Publication of Significant Research

By the end of the summer of 1969 they were successful. Public support and concern were everywhere evident. Their case was made even stronger as various studies came to be released.

Prior to the June hearings, Secretary Hickel of the Department of Interior ordered a study of the effect of the jetport on the environment, led by Dr. L. B. Leopold of the Department, sided by Arthur Marshall, Field Co-ordinator of the U.S. Fish and Wildlife Service. The National Academy of Sciences also began making its own study.

The Leopold report was released in mid September. Its summary included the following findings and recommendations:

"Development of the proposed jetport and its attendant facilities will lead to drainage and development for agriculture, industry, housing, transportation and service in the Big Cypress Swamp which will inexorably destroy the south Florida ecosystem and the Everglades National Park."⁵ They further felt that the training airport was intolerable, not because of its flight operations but because its very existence would promote urbanization and drainage that would destroy the ecosystem. Elimination of the training airport would inhibit land speculation and allow time for formation of public awareness of the environmental dangers involved.

The Academy of Science's report was not quite as strong in its opposition to the training airport but saw "full scale development of the jetport near the Everglades as leading to disastrous consequences, unless residential and industrial development were kept to a minimum and adequate water resource management practiced."⁶ The Academy report also dwelt on the question of increases in the danger of a tropical disease endemic in the region being introduced "through interaction of infected passengers with local vectors". If this were to happen it would be necessary to apply massive doses of insecticides about the jetport and probably deep into the Park itself with disastrous effects on the park.

Victory

Conservation groups were, of course, elated at the report findings but they could not stop pressing. Audubon published a summary of the Leopold report and continued to urge its membership to pressure official Washington. Late summer and early fall 1969 saw a great deal of anti-jetport publicity. Life, Time, the New York Times, Newsweek, the Christian Science Monitor all published articles in support of the conservationists' position.

5. "Jetport or Everglades Park? The Leopold Report", Audubon, Nov. 1969, p. 151.
6. Mueller, Marti, "Everglades Jetport: Academy Prepares a Model", Science, Oct. 10, 1969, p. 203.

On September 10, Secretary Volpe, Secretary Hickel, and Florida Governor Claude Kirk met and decided the jetport site should be moved. Dade County authorities were understandably annoyed and unhappy. They had already spent \$13 million and hated to see it abandoned in the face of State and national pressures.

The question was finally settled by the President of the United States. Richard Nixon, under urging from Secretary Hickel, announced on Thanksgiving Day that he had made his personal decision. The jetport could not be built on that site. He determined that the "landing strip for jet planes, already built, would be allowed to function, but only so long as it proved, after 90 days, that it did not destroy wildlife, pollute or contaminate its environment, or threaten the water supply of the Everglades National Park and the lower west coast of Florida."⁷

This was all made legal and binding in January 1970 when the Federal government, the State of Florida and the Dade County Port Authority signed the Everglades Jetport Pact. This carefully stated restrictions and agreed that after another jetport site had been approved the training strip would also be moved.

Questions and Activities

1. How did the conservation coalition attempt to influence the legislative branch of the Federal government? The executive branch?
2. What use was made of existing legislation in attempting to halt construction of the jetport?
3. What was significant about the membership of the coalition? What role did the media play in the "battle"?
4. What was the Leopold Report? Why was it important?
5. In your opinion was President Nixon justified in his decision to intervene in the jetport controversy?

Conclusion

This case study has concentrated on one specific "battle." However, the conservation groups used techniques practiced by most interest groups, whatever their cause. They collected evidence and gave testimony. They exerted influence with individual senators, and with administrators in the executive branch, including the President himself. They worked at the state level, in governor Kirk's office, and of course continually pressured their local antagonists, the Dade County Port Authority.

They were successful, not only because they had the law on their side (Section 4(f) of the Transportation Act) but because of the effective

7. Douglas, Marjory Stoneman, "Victory in the Everglades", Interplay Mar. 1970, p. 9.

pressure of their united membership. Official Washington simply could not ignore the potential votes and financial support of the membership of 22 organizations representing the conservation and environmental movement as well as organized labor.

Anthony Smith, President and General Counsel, National Parks Association, wrote in the National Parks and Conservation Magazine, "The people of Florida and of America made it very clear during this long struggle that they were determined to protect Everglades National Park and the Everglades and Cypress country in Florida. The Everglades coalition was one of the first powerful combinations which have risen recently to combat the many modern threats to the life environment. The environmental coalition has also taken issue with the promoters of the Trans-Alaska pipeline, dams on rivers, and wildlife poisoning. The tentative success of the battle to save the Everglades shows what unity and cooperation among environmentalists can do".

It also shows a very effective interest group in action. Individually or in coalition, conservation groups represent a dynamic, experienced lobby: one whose voice cannot be ignored at any governmental level.

Questions and Activities

1. Take a conservation battle - the Everglades jetport or another of national or local interest. Have different members of the class research various positions on the issue. Assign roles and hold a mock hearing or have a debate to determine which side has the most valid argument.
2. What groups in your community function to preserve the environment? What are the issues in your area? What are the groups doing in relation to these issues? What are you doing as an individual?

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